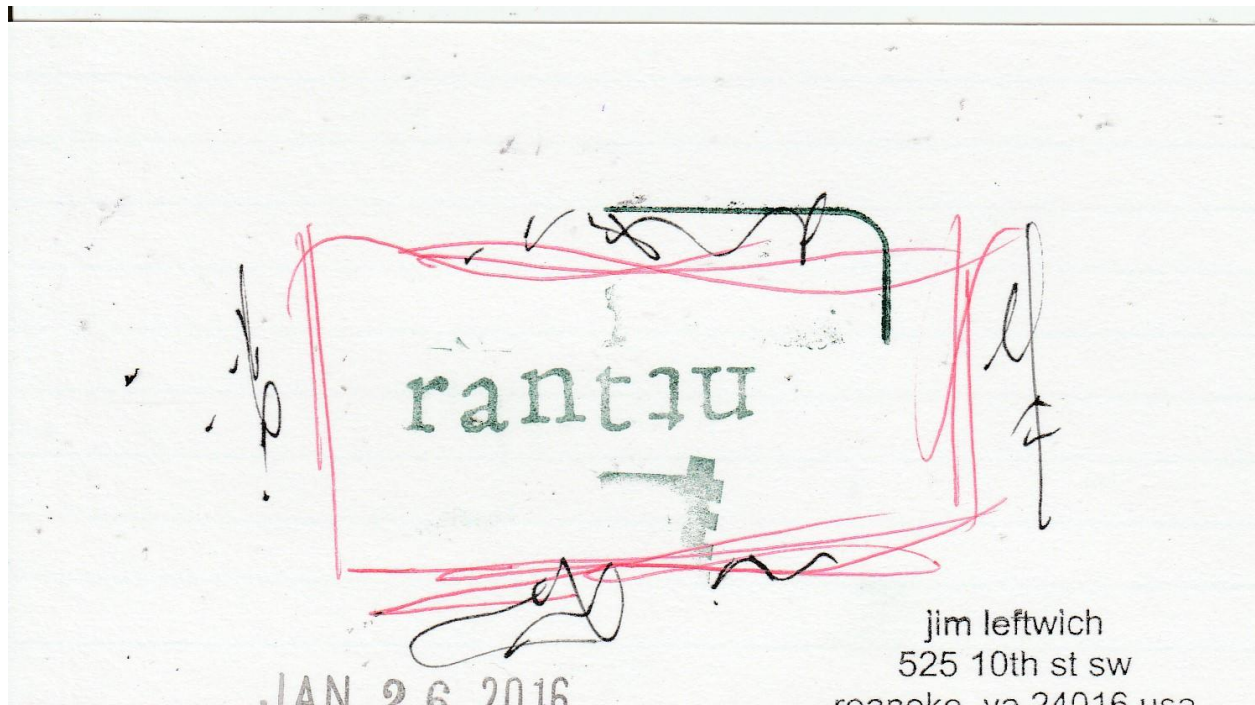


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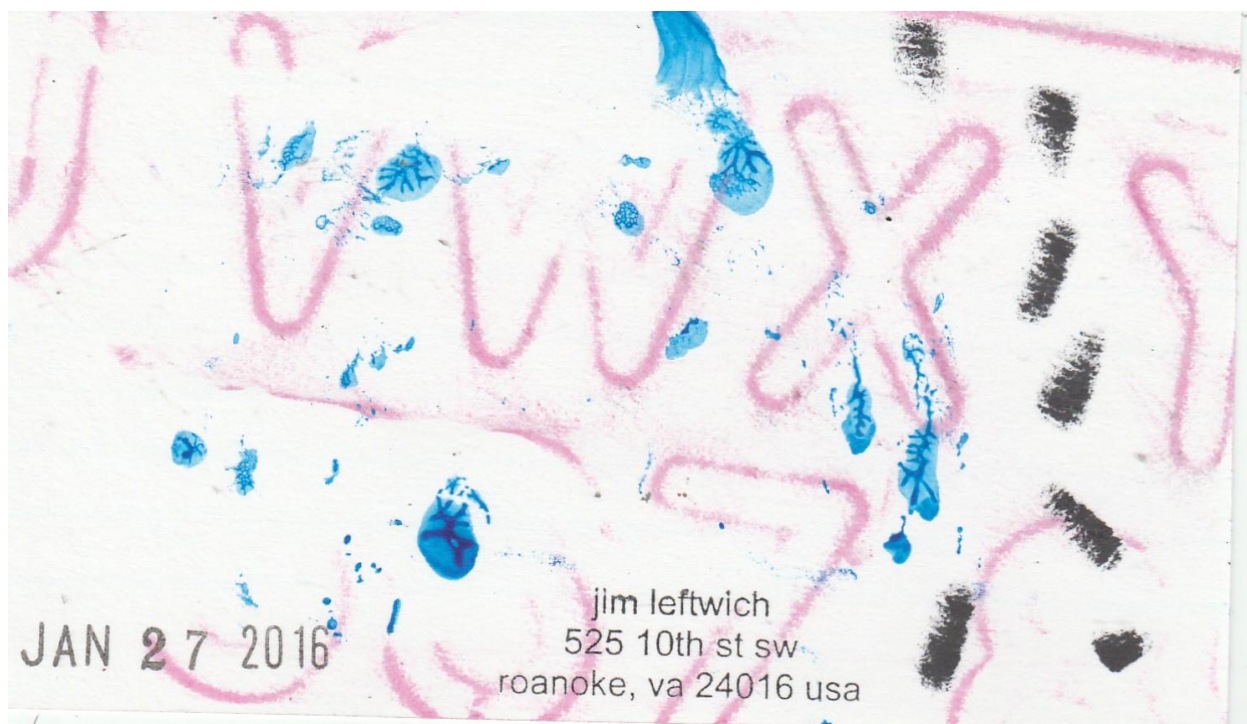
visual poems ongoing research 2016 -vol. 3



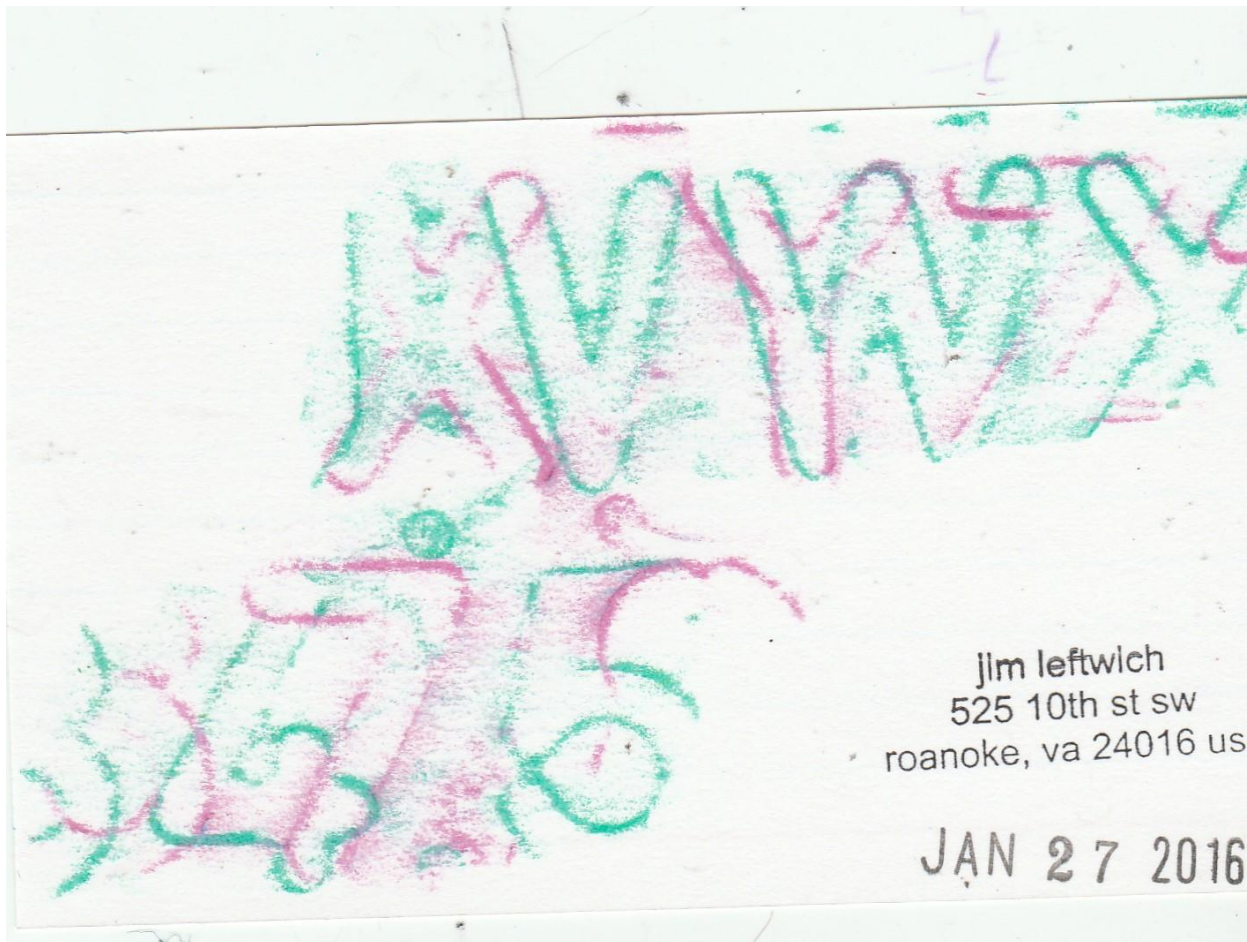










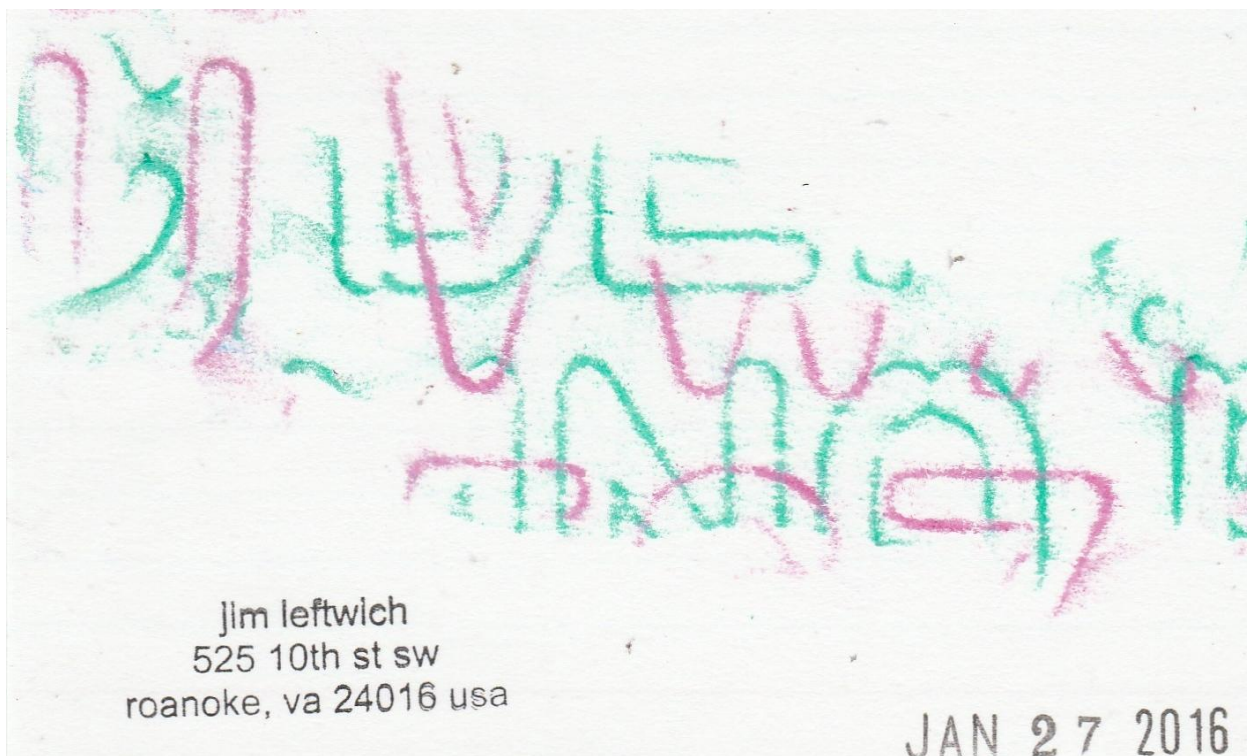
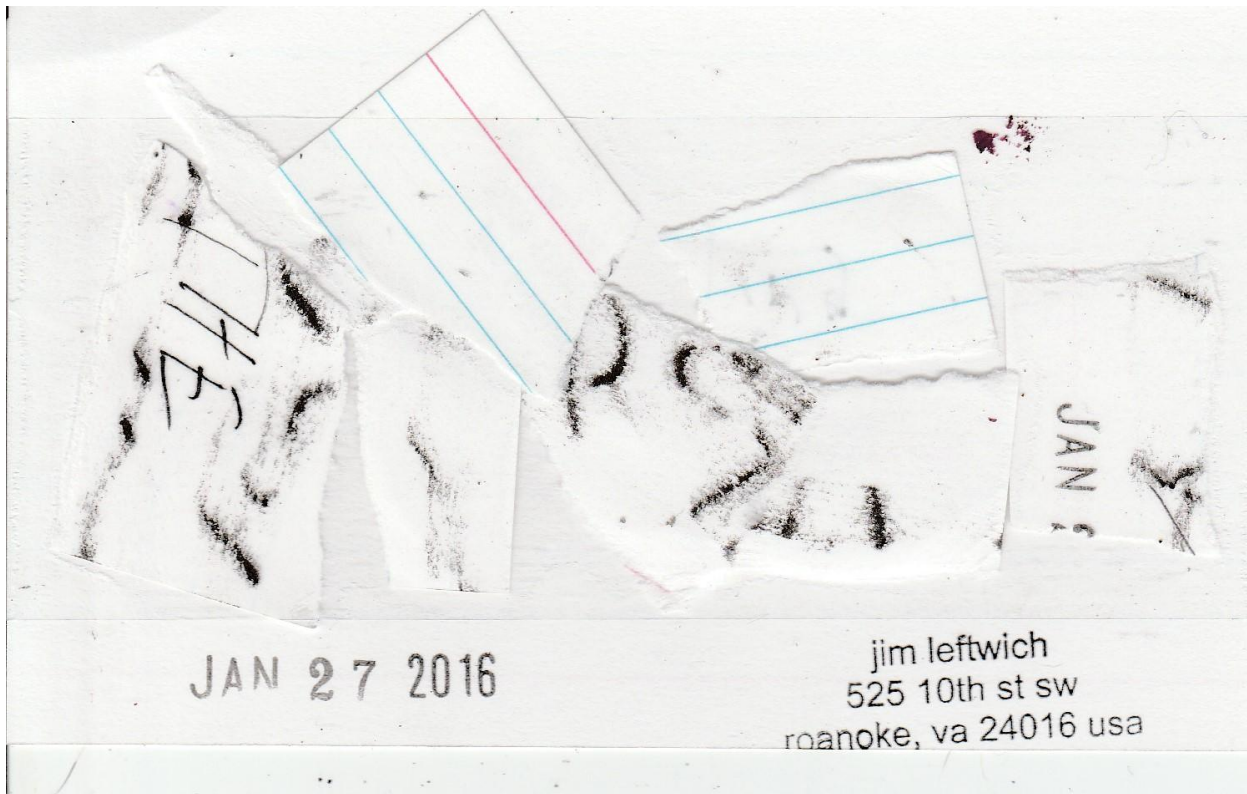


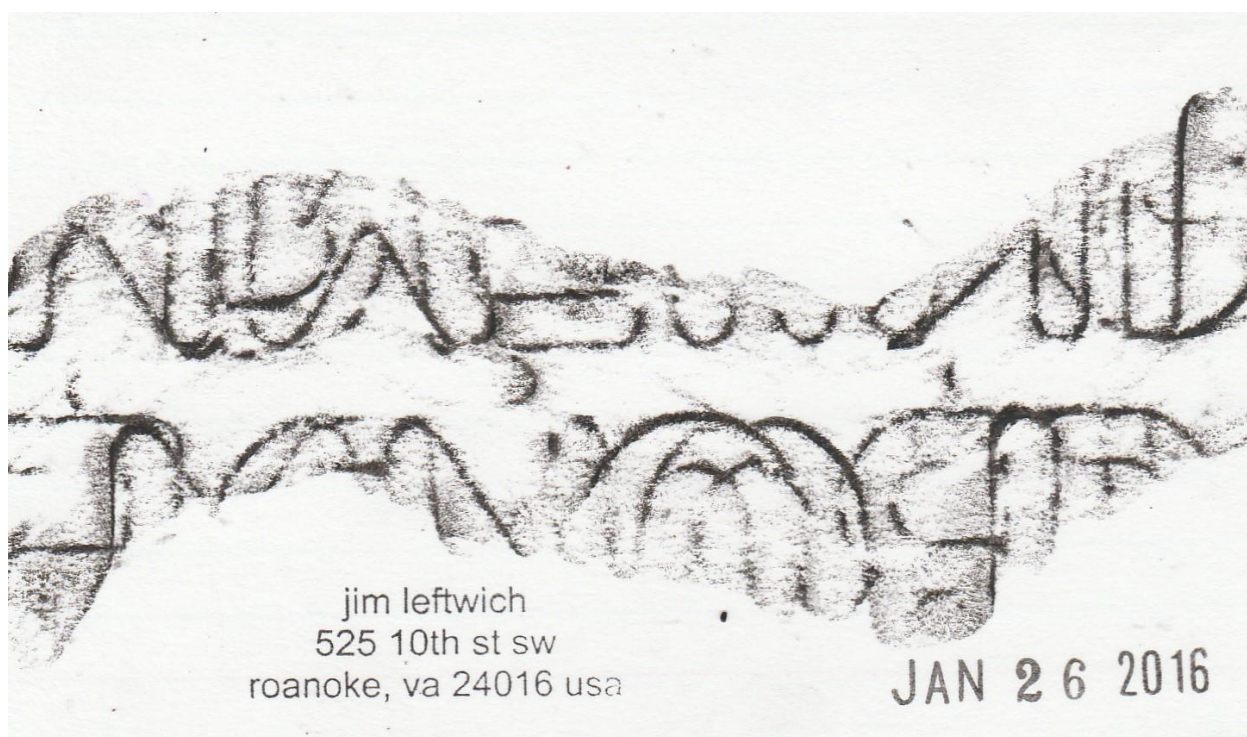
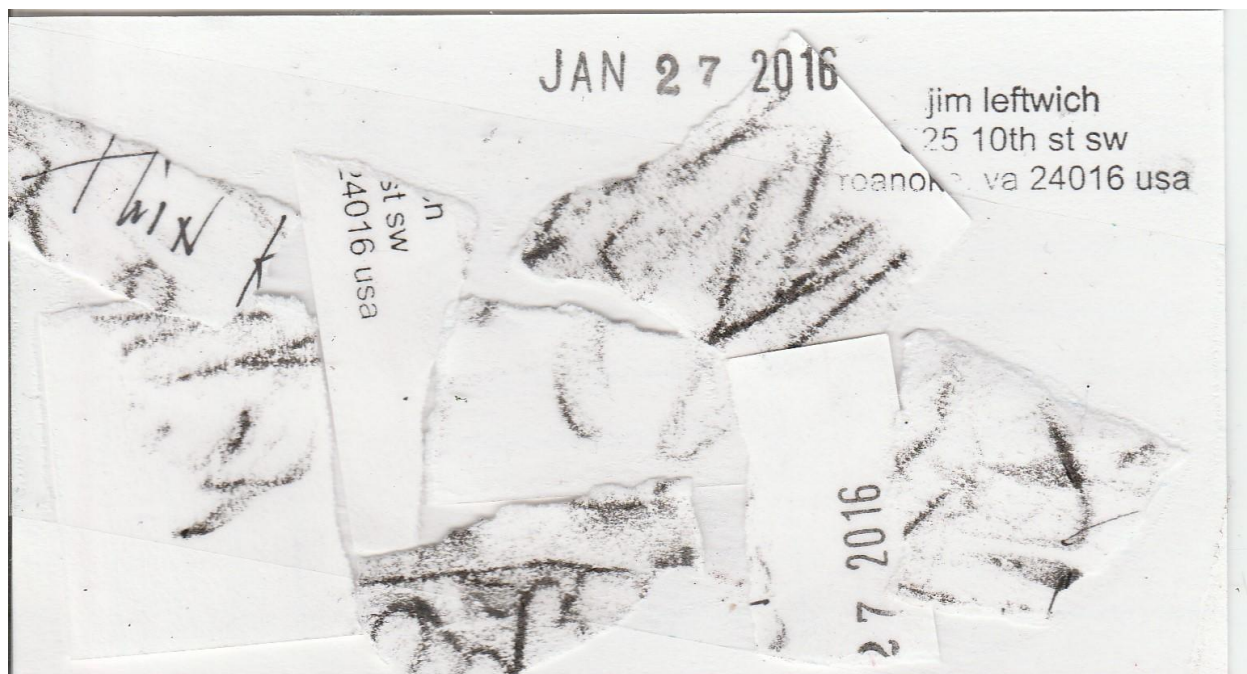
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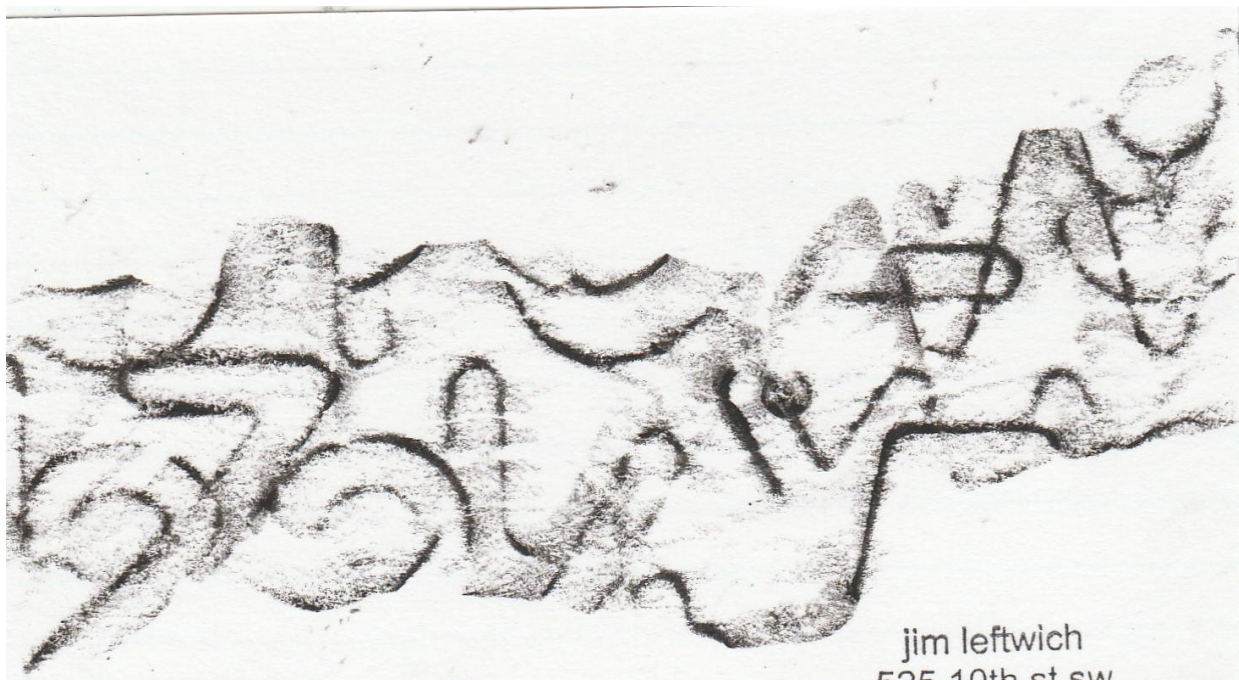






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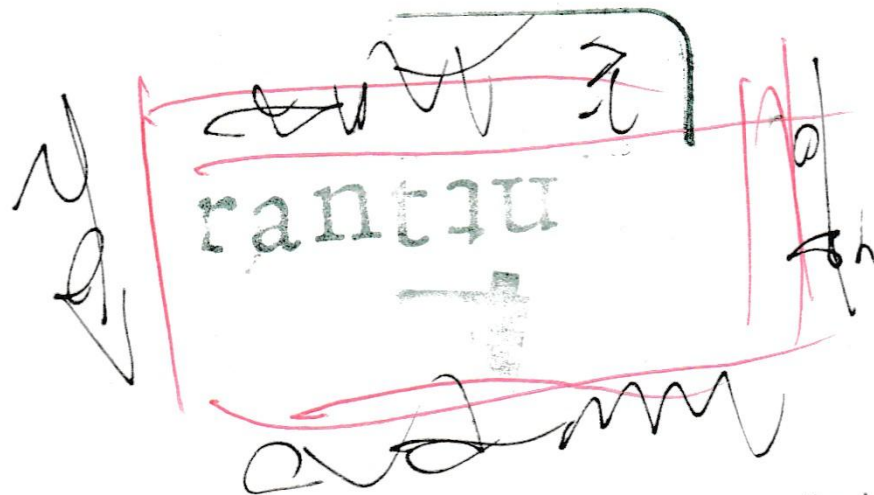
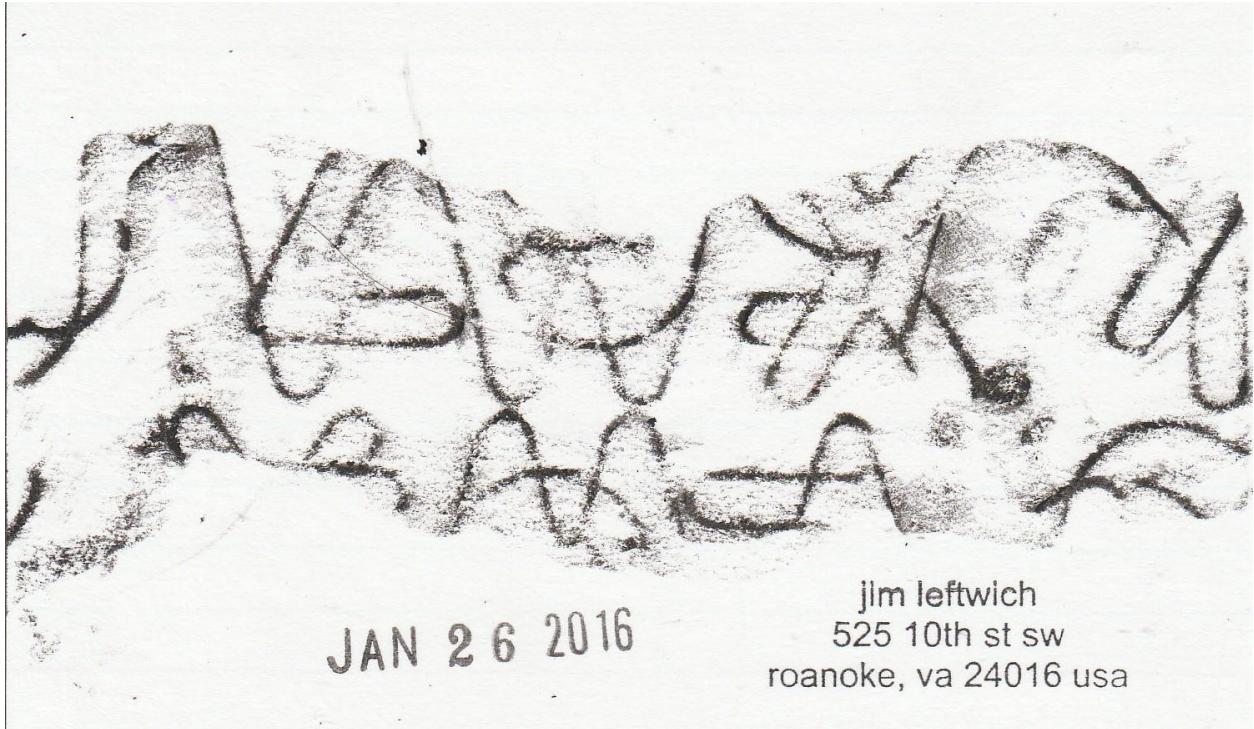


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ordered pair

degree of a curve or of an equation; also, the number of rows or columns of a determinant.

Man belongs to the class Mammalia, the ORDER Primates and the family Hominidae.

ordered pair

MATHEMATICS. A pair of numbers, usually enclosed in parentheses, described as ordered because the order in which they occur is important; for example, (x, y) is not generally equal to (y, x) .

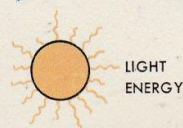
Because a rational number may be considered an ORDERED PAIR of integers, $(2/3)$ may be written $(2, 3)$.



ordinal number

MATHEMATICS. A number that designates position in an ordered sequence, as first, second or third.

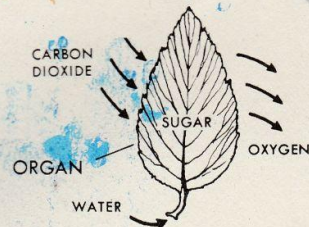
The fifth page and the eighth of May are both expressions containing an ORDINAL NUMBER.



ordinate

MATHEMATICS. The signed number that represents the direction and the distance of a point from the x-axis of a Cartesian coordinate system.

The second number of an ordered pair of numbers denoting a point in a coordinate system is the ORDINATE of the point.



ore

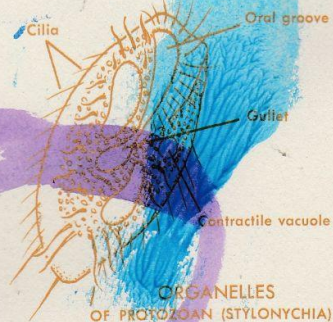
CHEMISTRY and EARTH SCIENCE. Any rock or natural mineral aggregate found in the earth's crust from which useful metals may be extracted.

Bauxite is an ORE of aluminum.

organ

BIOLOGY. A group of cells or tissues that forms a part of a plant or animal and performs a specific function.

In plants, the leaf is a food-making ORGAN.



organelles

ZOOLOGY. In one-celled organisms, small parts with special functions. They may be compared with organs in many-celled organisms.

Numerous ORGANELLES called cilia enable some protozoans to move about.

O

oasis \ə-ˈsi-si-ɪ/

EARTH SCIENCE. A fertile area in a desert, characterized by a water supply, such as a natural spring, and usually by the presence of trees and other vegetation.

It is sometimes possible to create an oasis in the desert by means of irrigation.



objective lens \əb-ˈjek-tiv-ˈlenz/

PHYSICS. In a microscope or telescope, the lens, or combination of lenses, closest to the object being viewed.

In a compound microscope, the OBJECTIVE LENS may be used to produce different magnifications.

oblateness \əb-ˈlāt-nəs/ *n.*

ASTRONOMY. A flattening or depression of a spheroid at the poles.

The earth's OBLATENESS is shown by the difference in its polar and equatorial diameters.



oblique angle \əb-ˈblek-ˈan-gəl/

MATHEMATICS. Any angle that is not a right angle or a straight angle, as an acute, obtuse or reflex angle.

If one of the angles of a parallelogram is an OBLIQUE ANGLE, then all its angles are oblique.

observatory \əb-ˈzər-və-tōr-ē/

1. **ASTRONOMY.** A building containing a telescope and other equipment necessary in the study of astronomical objects and phenomena. 2. **EARTH SCIENCE.** A building equipped for observing and recording meteorological, magnetic or seismological phenomena.

The largest optical telescope in the world is located in an observatory on Mount Palomar in California.



obtuse angle \əb-ˈt(y)ūs-ˈan-gəl/

MATHEMATICS. An angle greater than a right angle and less than a straight angle.

A plane triangle can have only one OBTUSE ANGLE.

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numeral

system, determined by a straight line and two points on that line. One point, called zero, is the origin, and another point, called one, is usually placed to the right of zero, determining the unit of the scale. From these two points, every point of the whole line may be determined in such a way that corresponding to each point on the line there is a real number, called its coordinate, and corresponding to each real number there is a point on the line.

Understanding the use of a NUMBER SCALE is basic to all types of graphical representation.

numeral \n(ə)ˈm(ɪ)riəl n

MATHEMATICS. The symbol used to represent a number, as an Arabic numeral or a Roman numeral.

The Arabic NUMERAL 32 can also be represented by the Roman numeral XXXII.

numerator \n(ɪ)ˈm(ɪ)ri-ət(ər) n

MATHEMATICS. That term of a fractional numeral, or symbol, representing a fraction, written above the dividing bar, or line.

In the fraction $\frac{3}{4}$, the NUMERATOR is 3.

nutiation \n(ɪ)ˈtʃeɪʃən n

ASTRONOMY. A slight but regular change in the direction of the earth's axis, caused by the varying gravitational attraction of the sun and moon upon the earth; the wobbling of the earth's axis as the axis slowly precesses. 2. botany. Spining movement in the growth of certain plant parts, particularly stem tips and tendrils, due to unequal growth rates of cells.

The NUTATION, or wavy motion in the precessional motion of the earth's axis, has a period of 18.6 years.

nutrient \n(ɪ)ˈnjuːt(ə)nt n

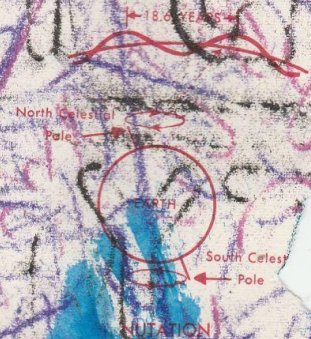
BIOLOGY AND PHYSIOLOGY. Any substance needed for the life and growth of an organism; a food.

Protein is a NUTRIENT used by the human body to build and repair tissues.

nymph \nɪˈm(p)ʃ n

ZOOLOGY. An immature stage in the life cycle of an insect undergoing gradual metamorphosis.

A grasshopper NYMPH resembles an adult in appearance and behavior.



NYMPH

GRASSHOPPER

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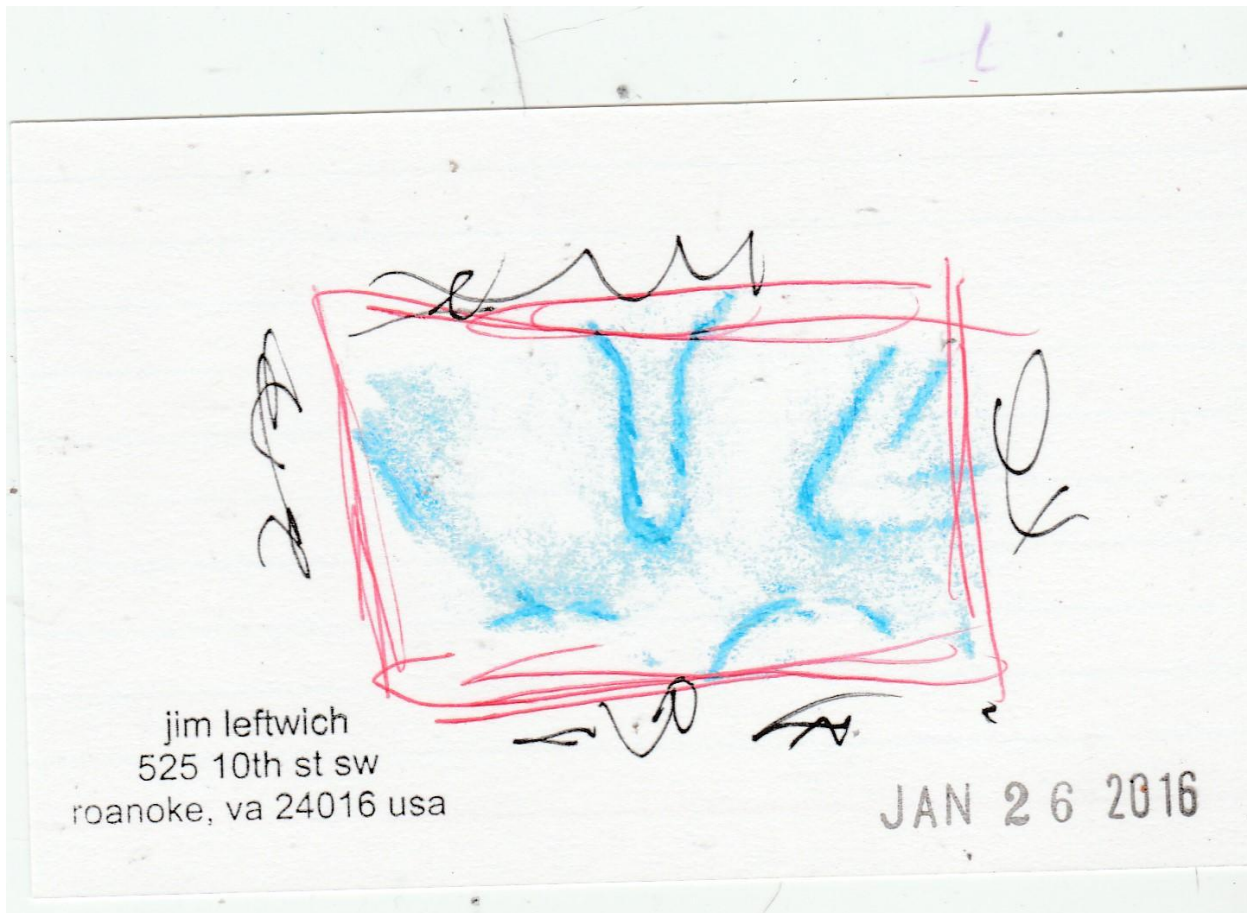
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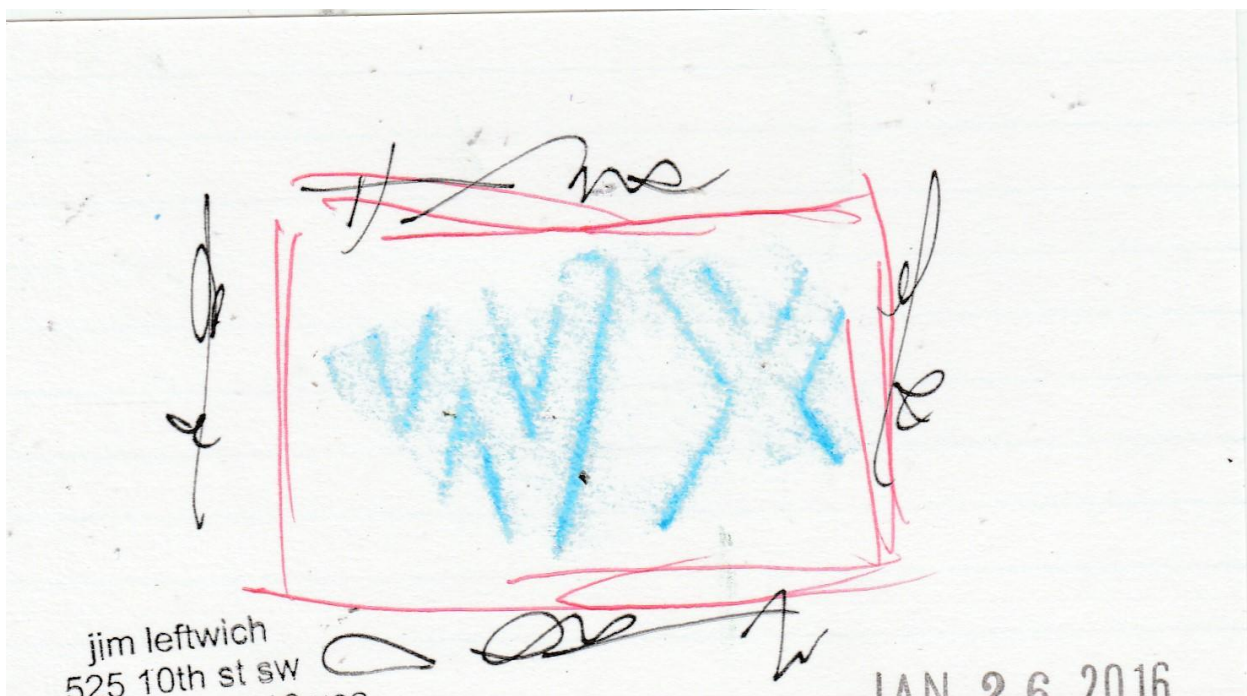
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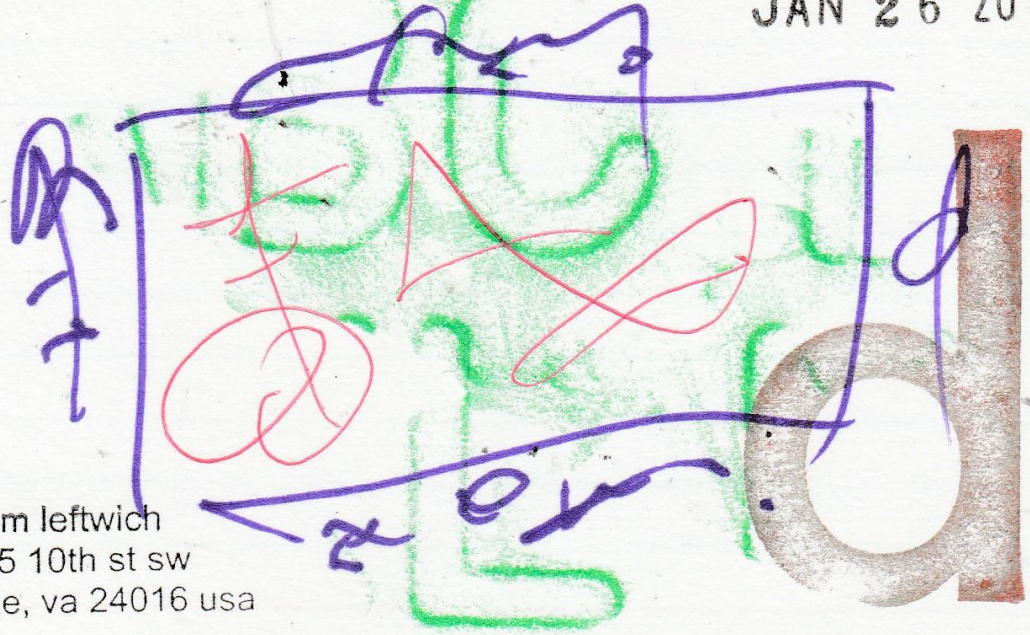


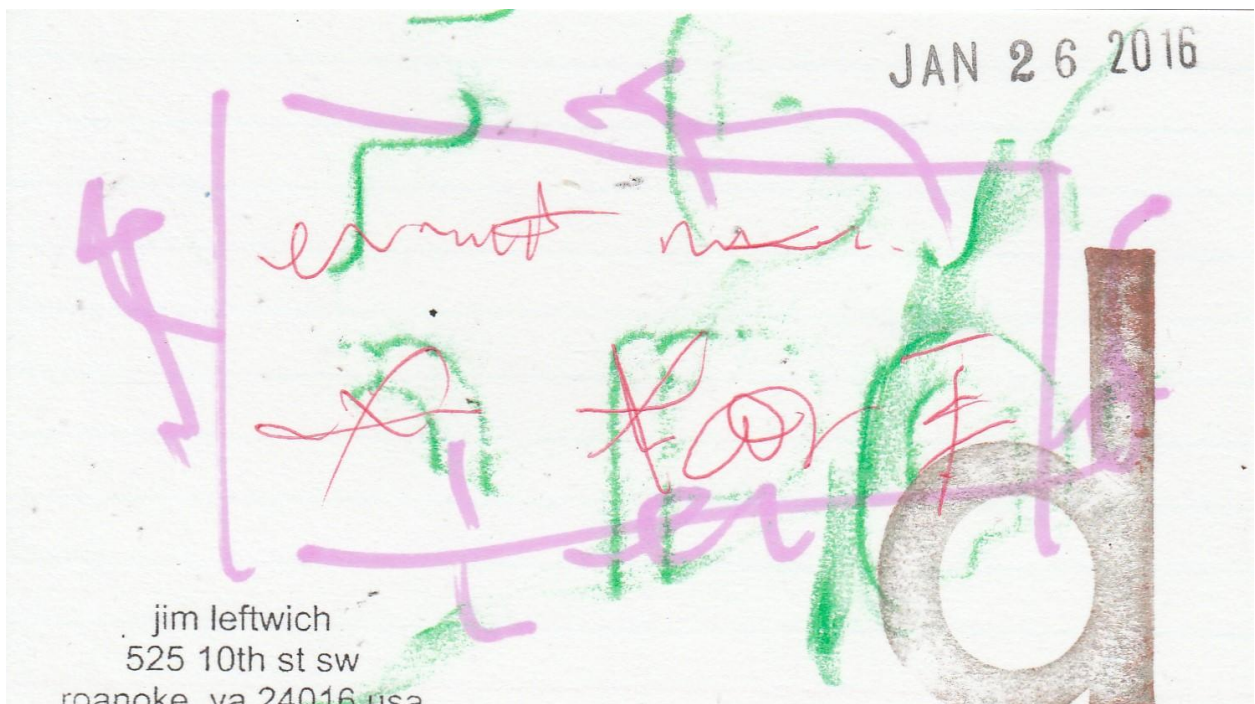
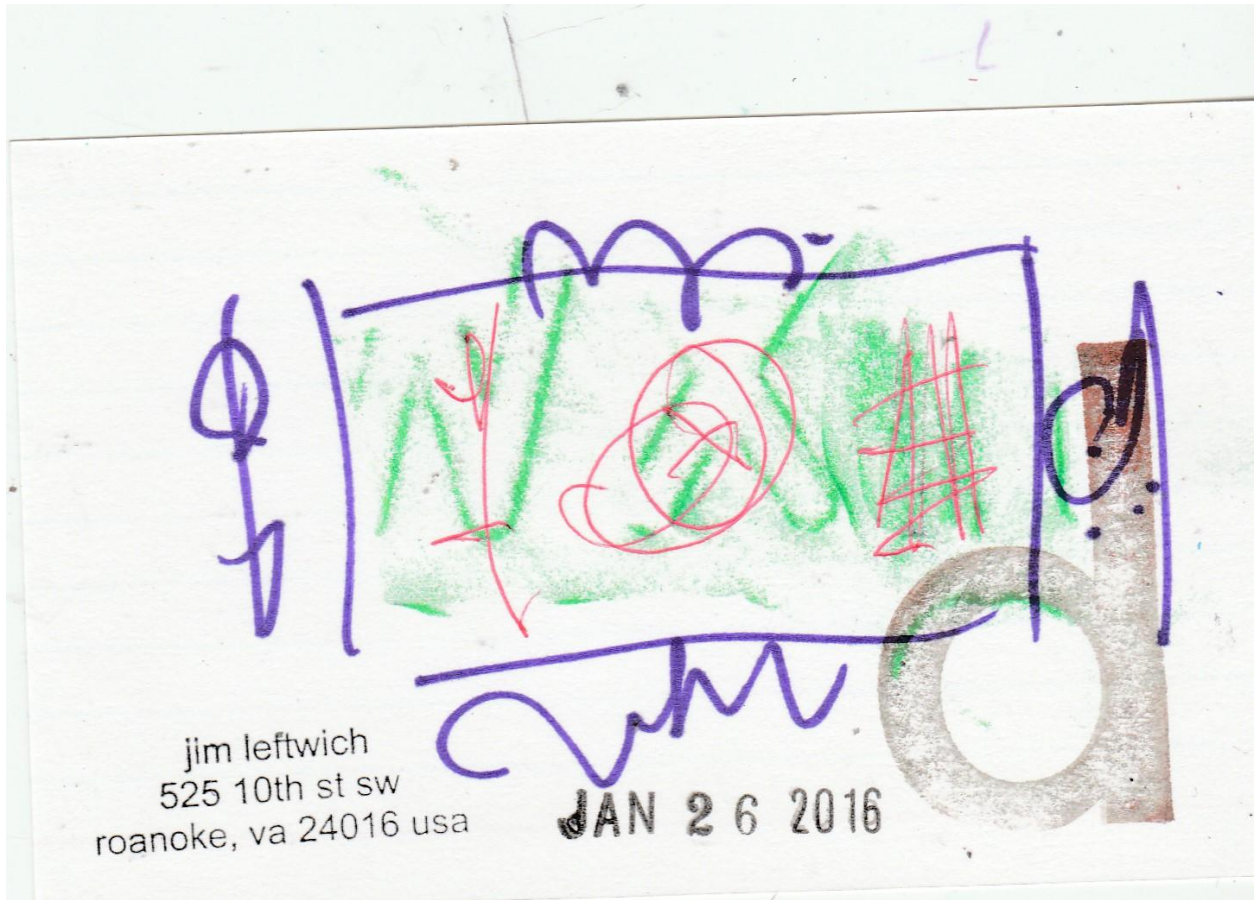
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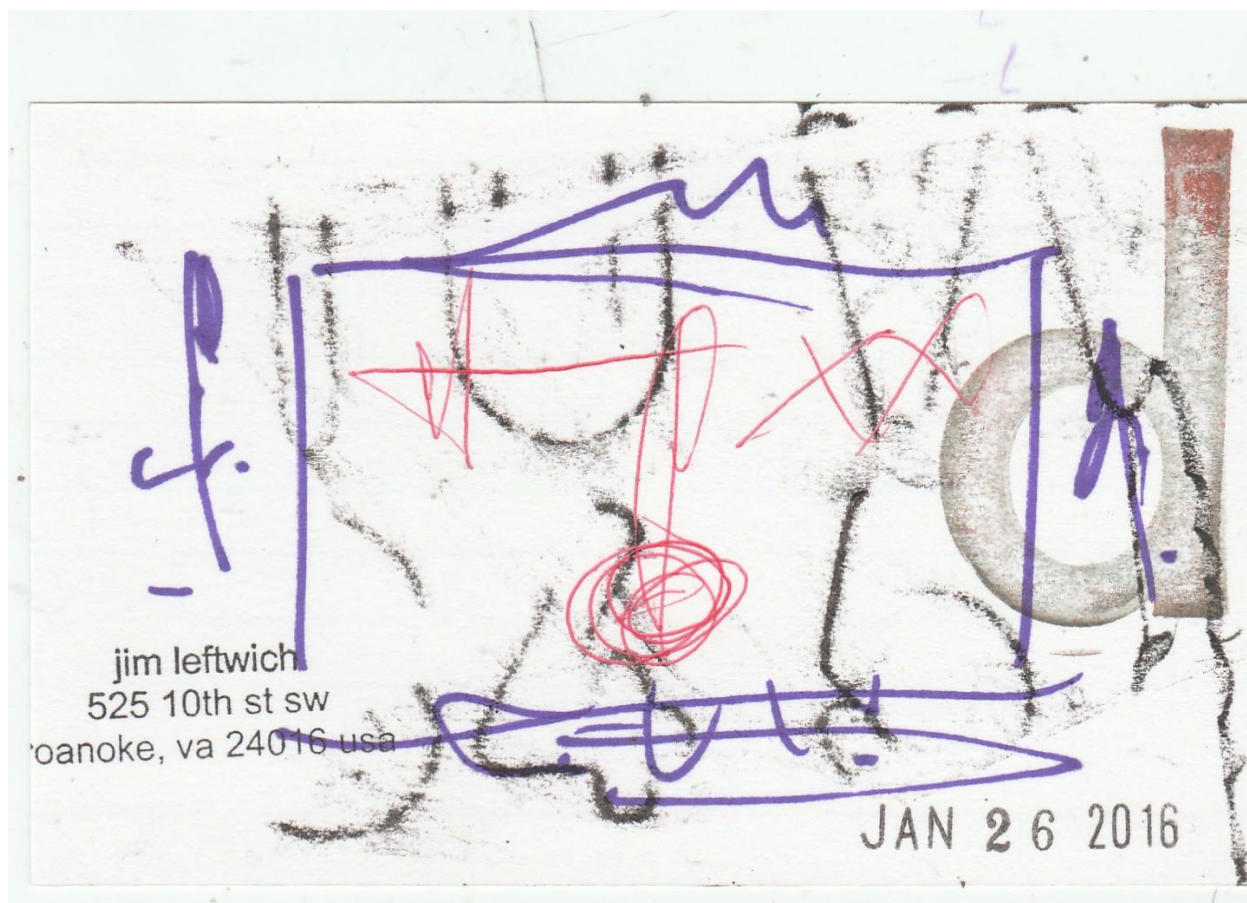
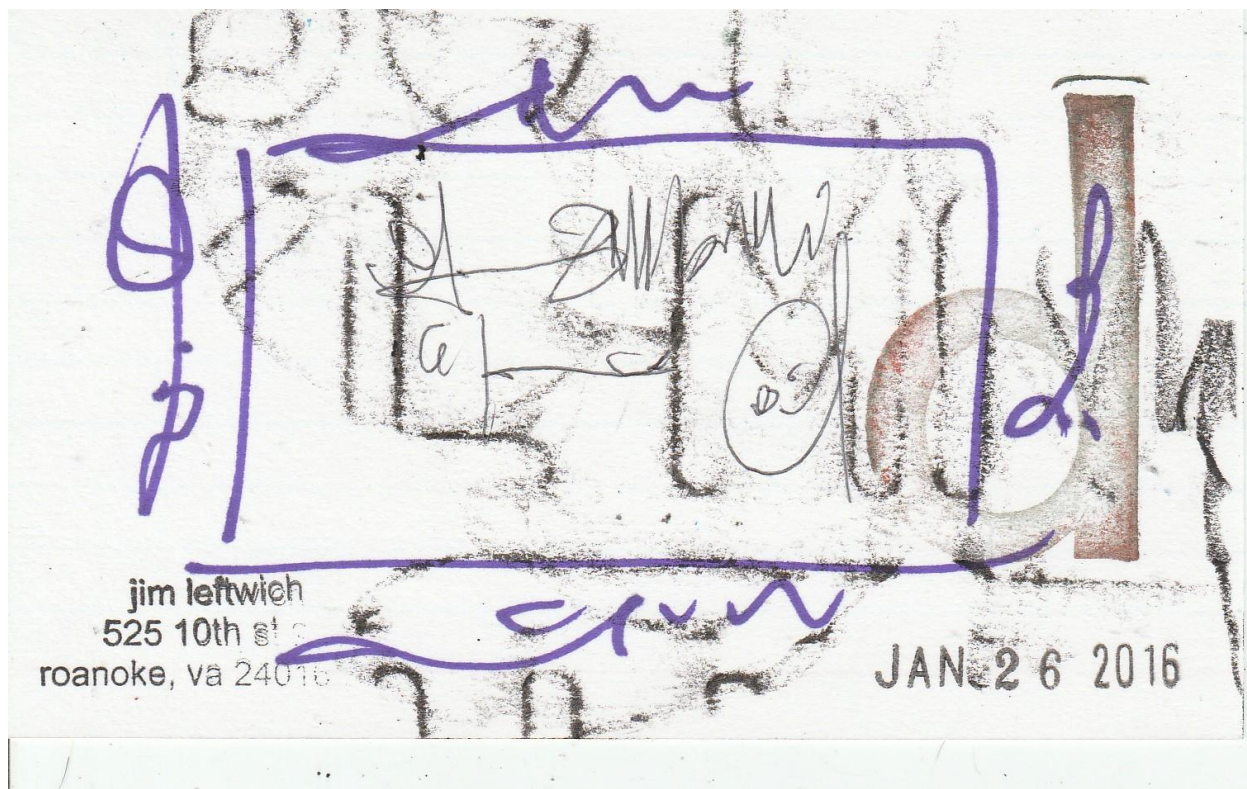
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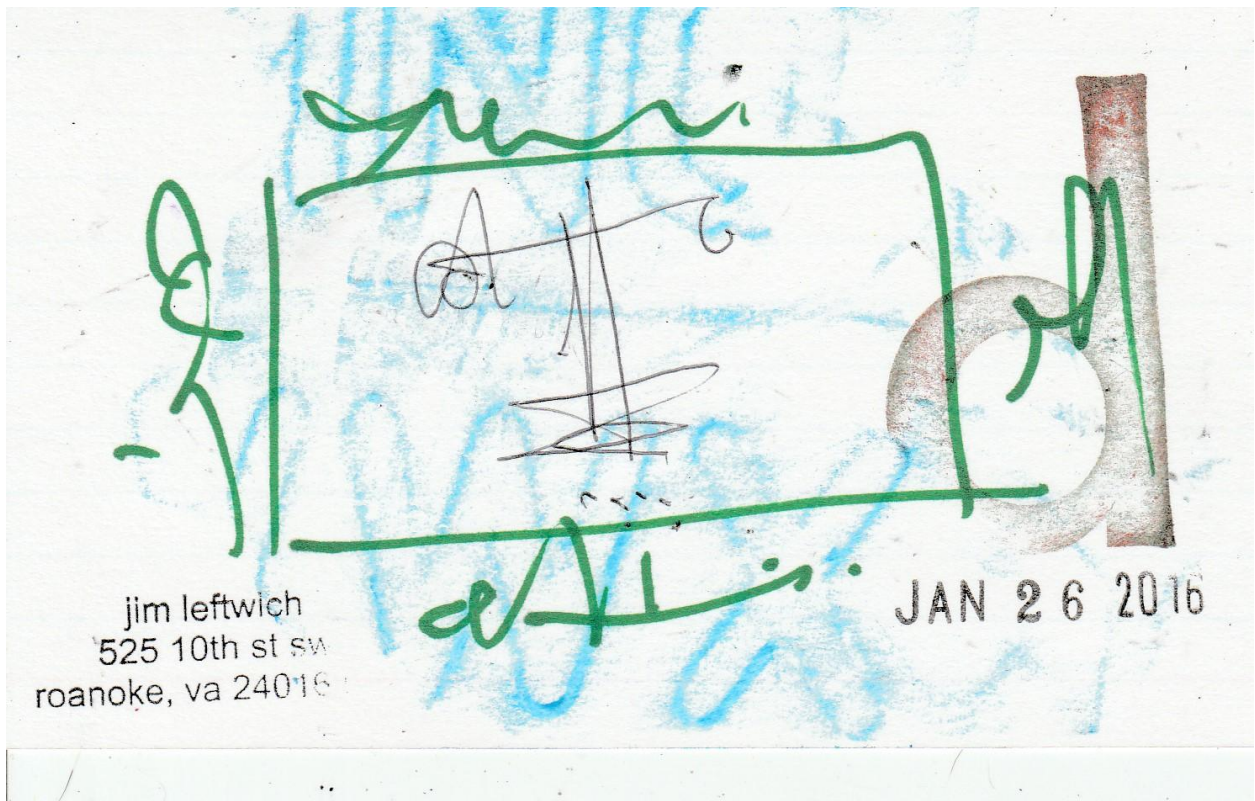
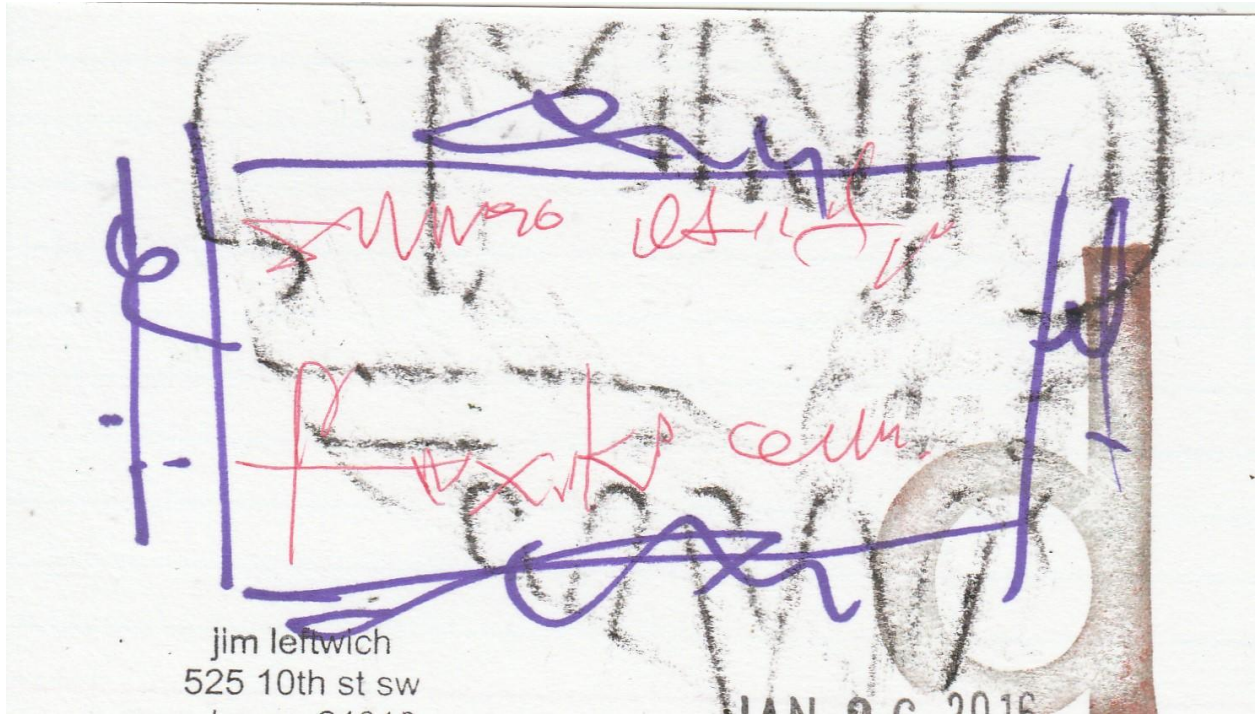
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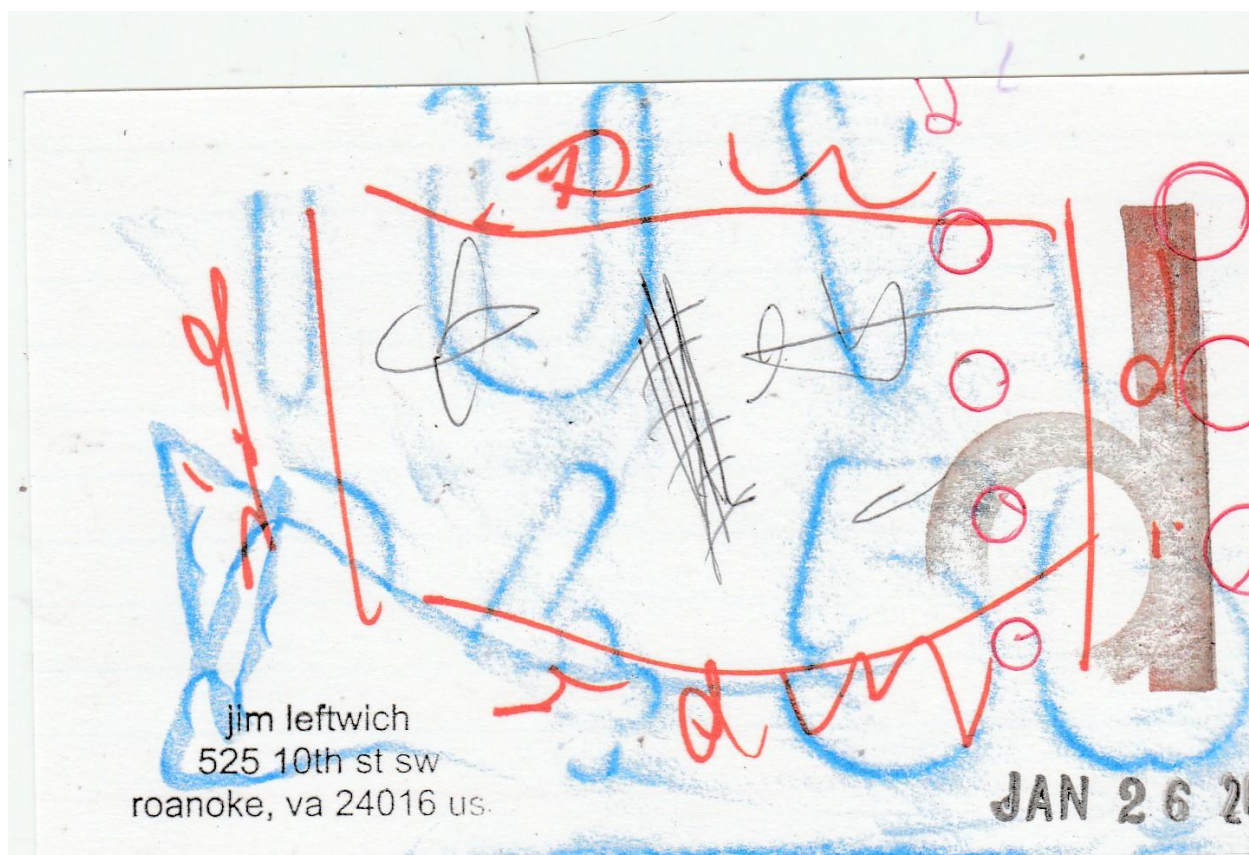
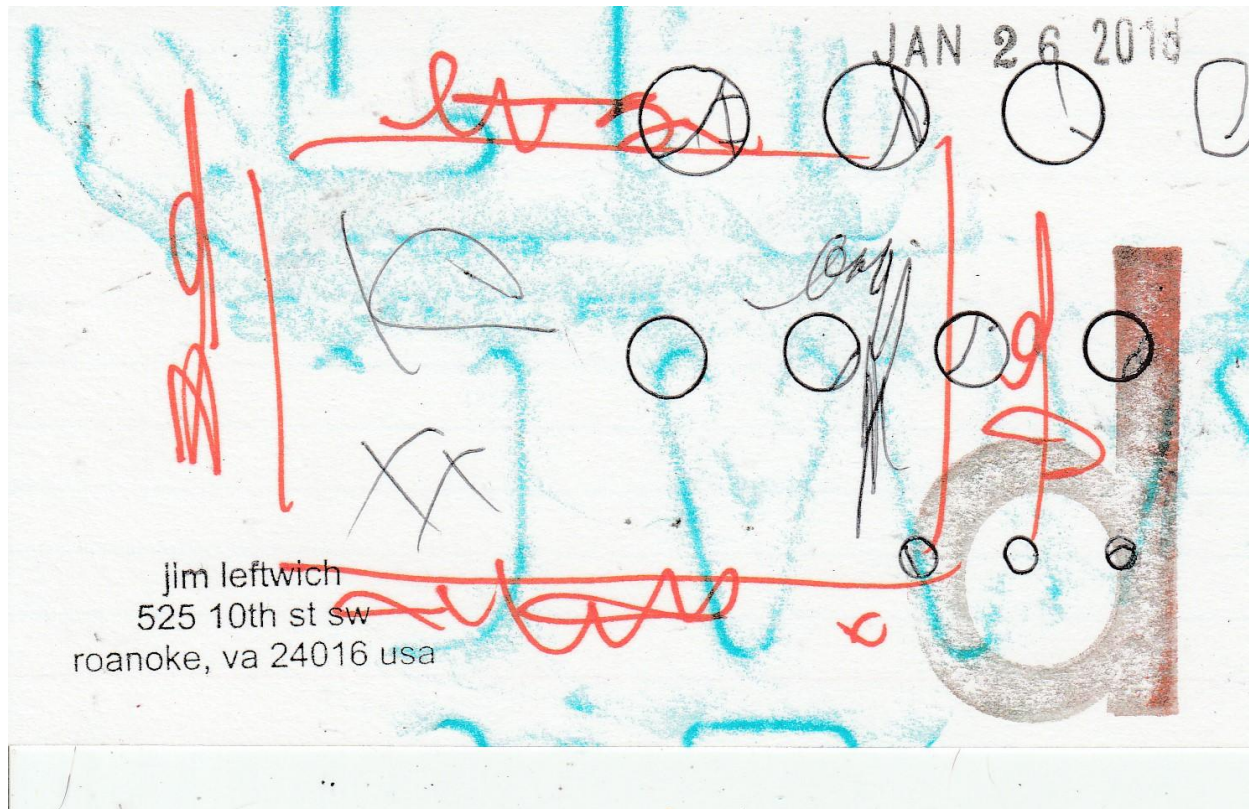


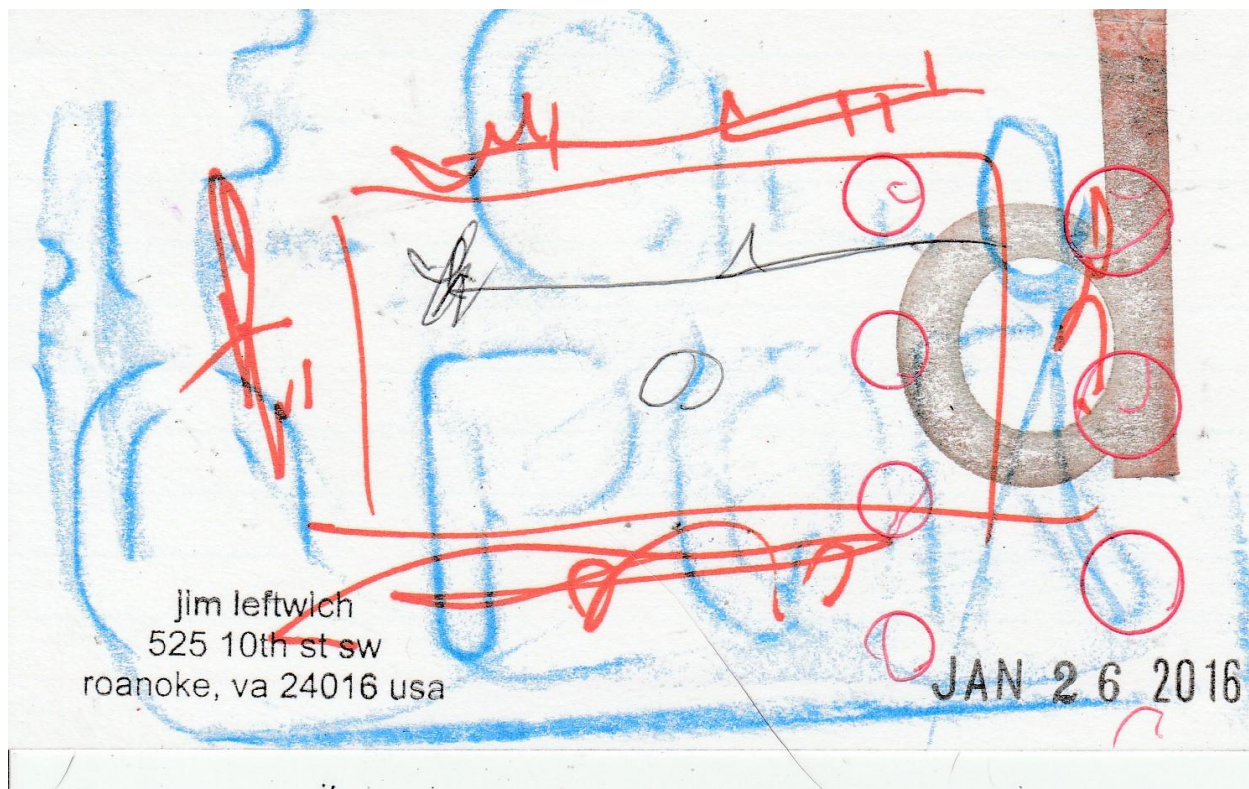
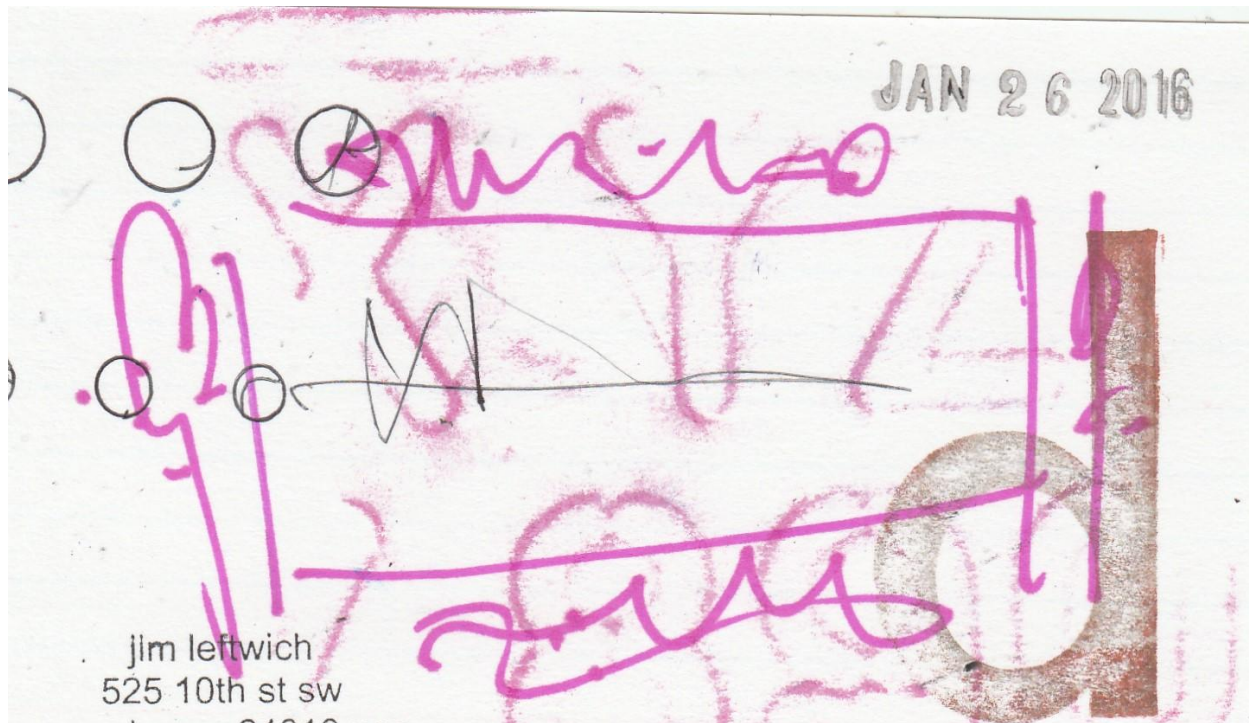
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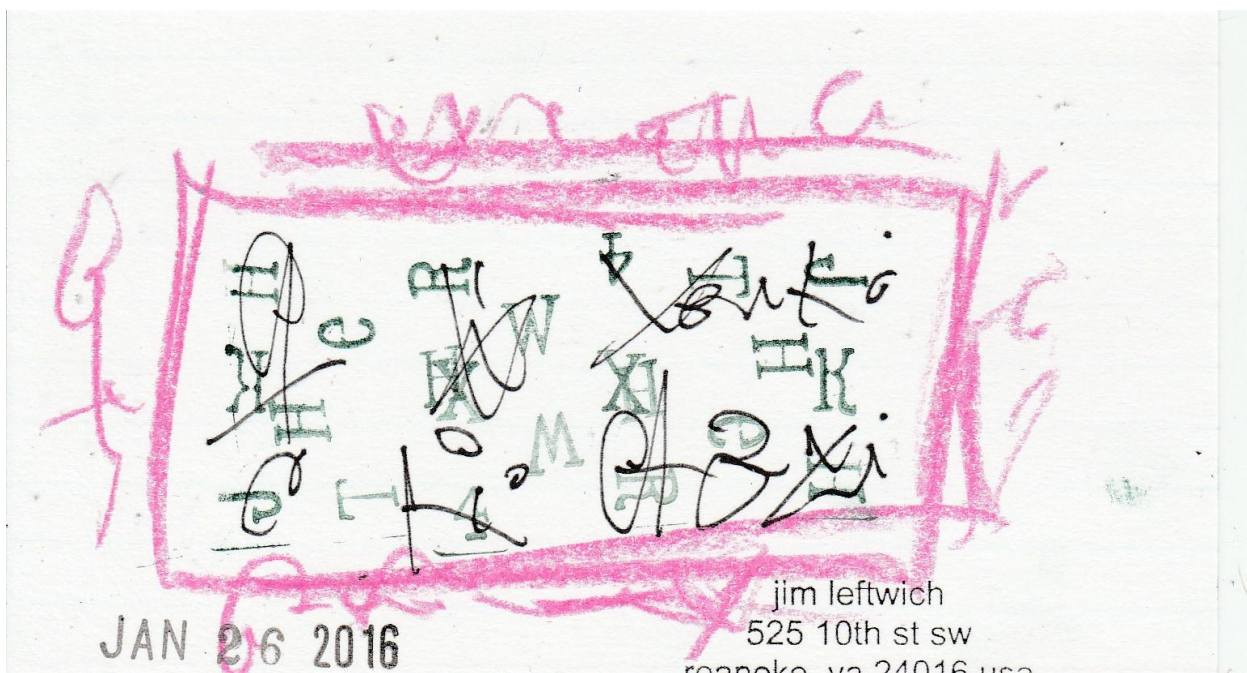
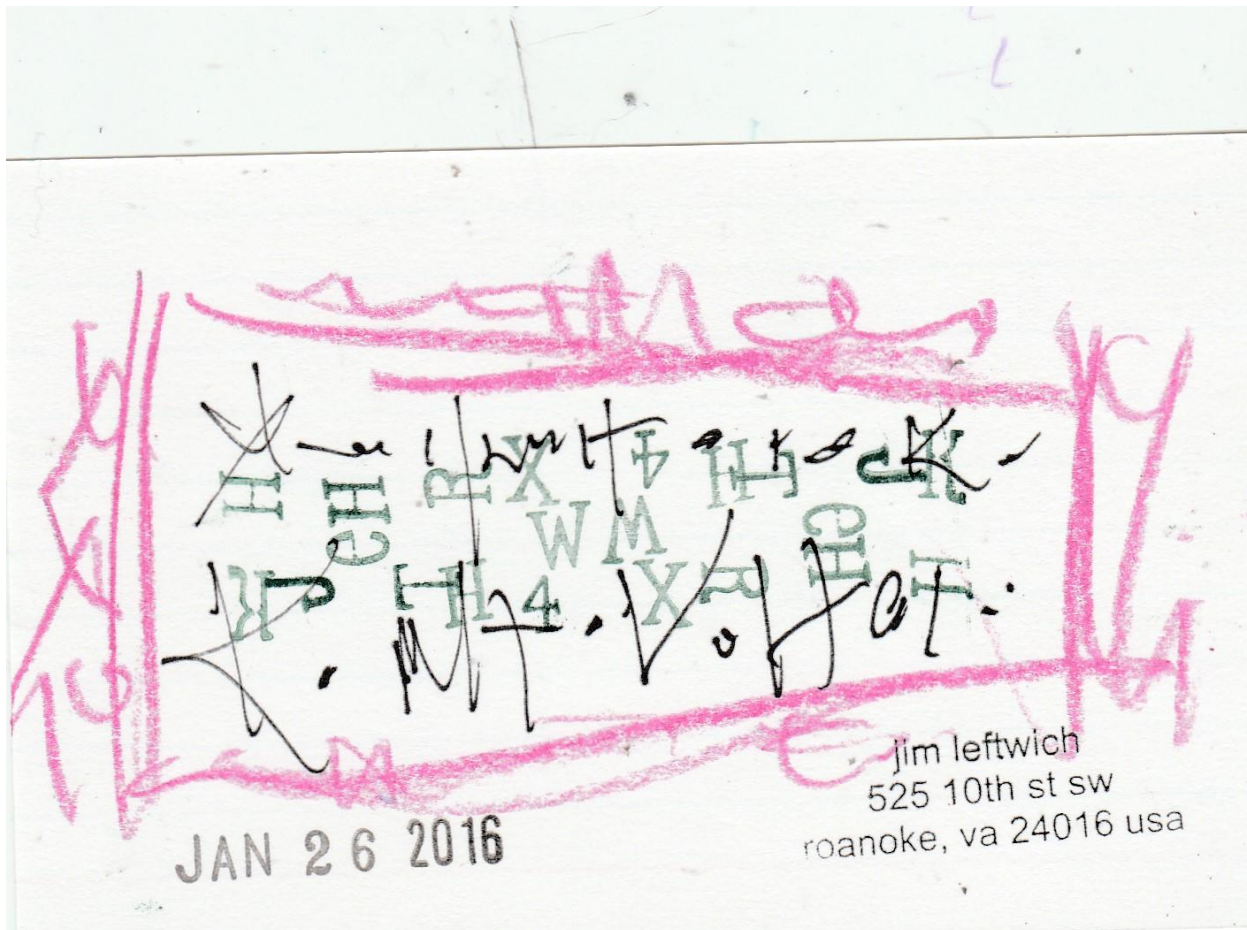
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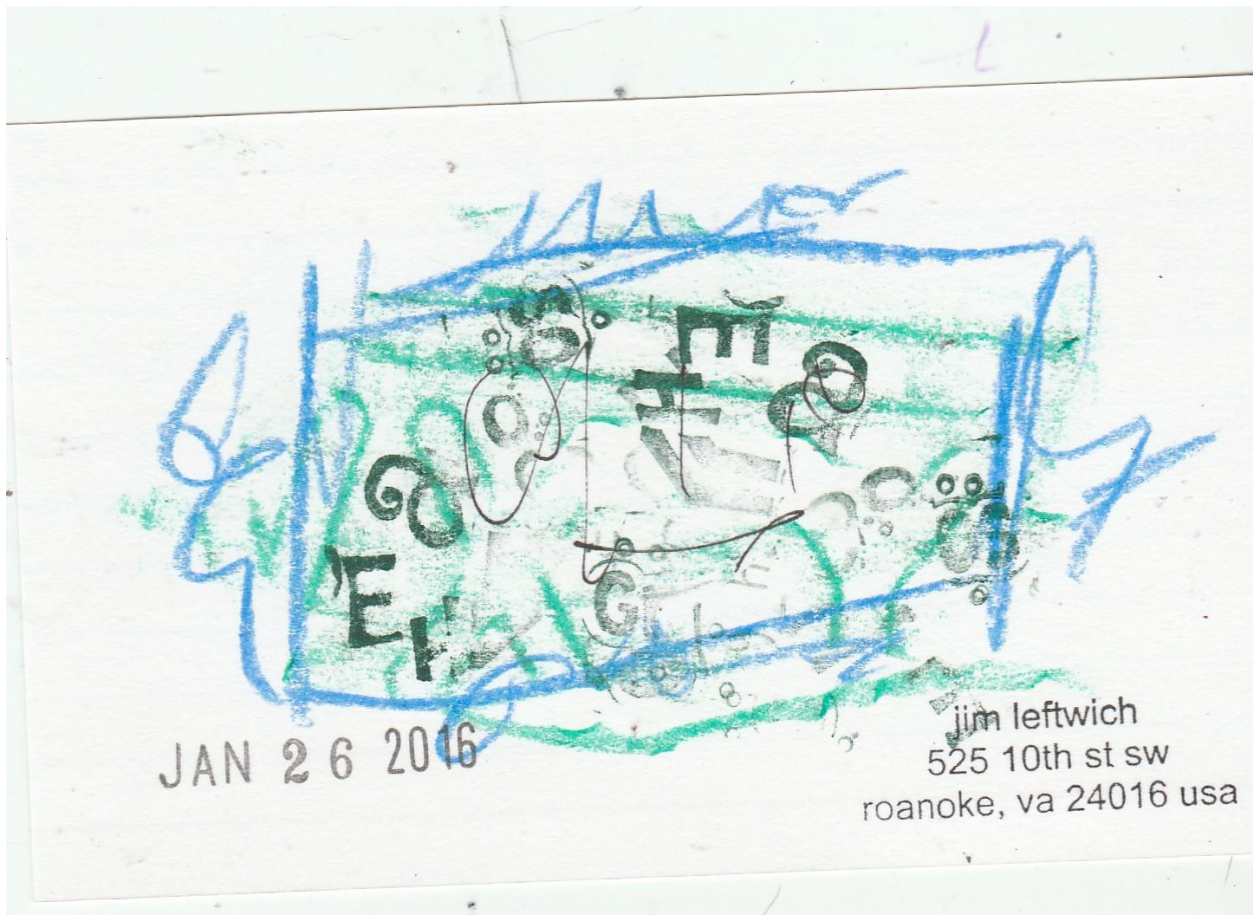
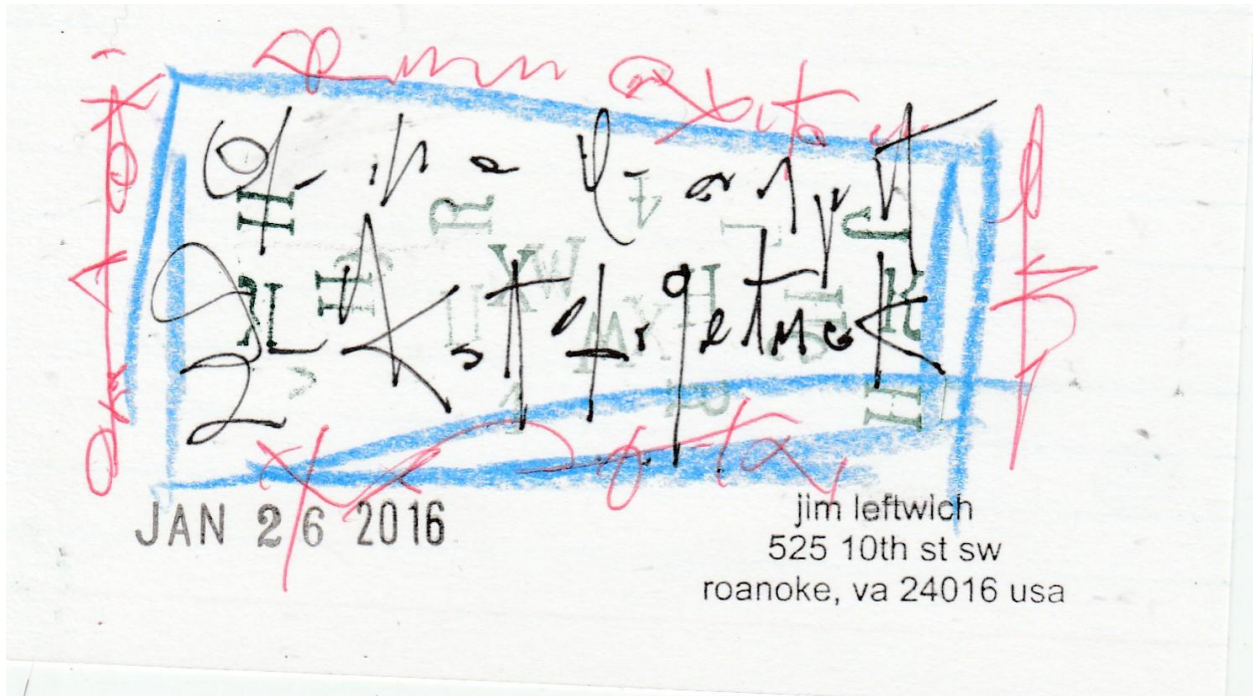
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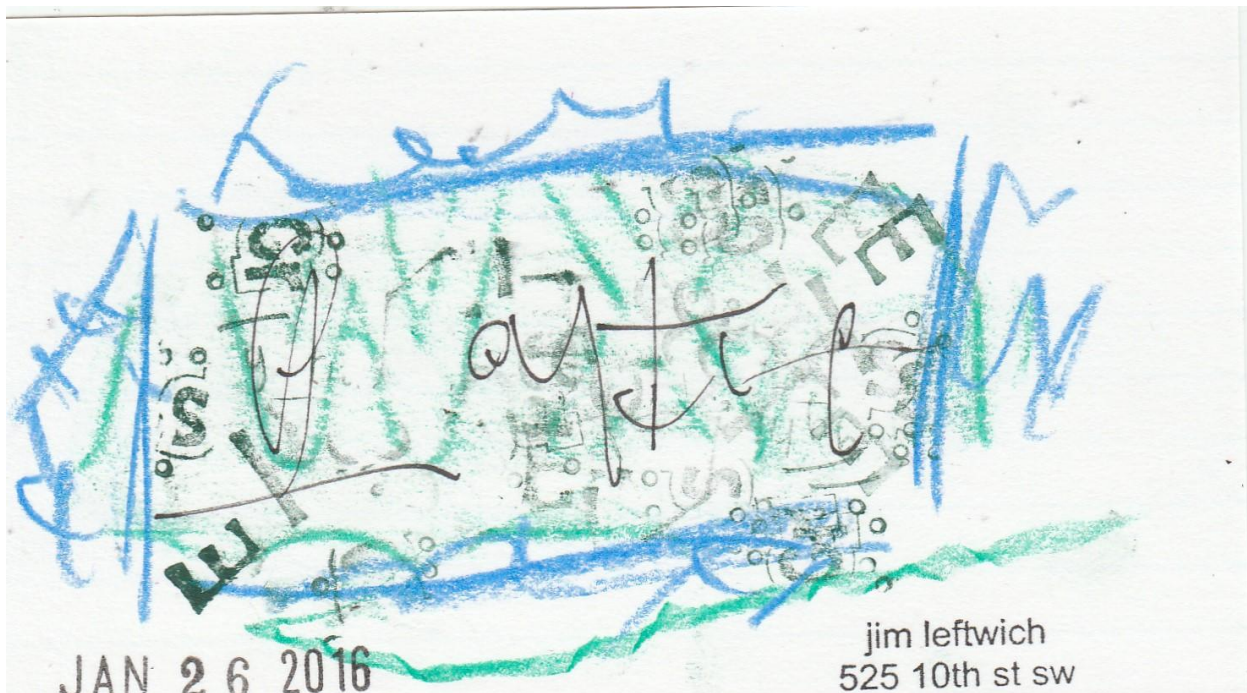
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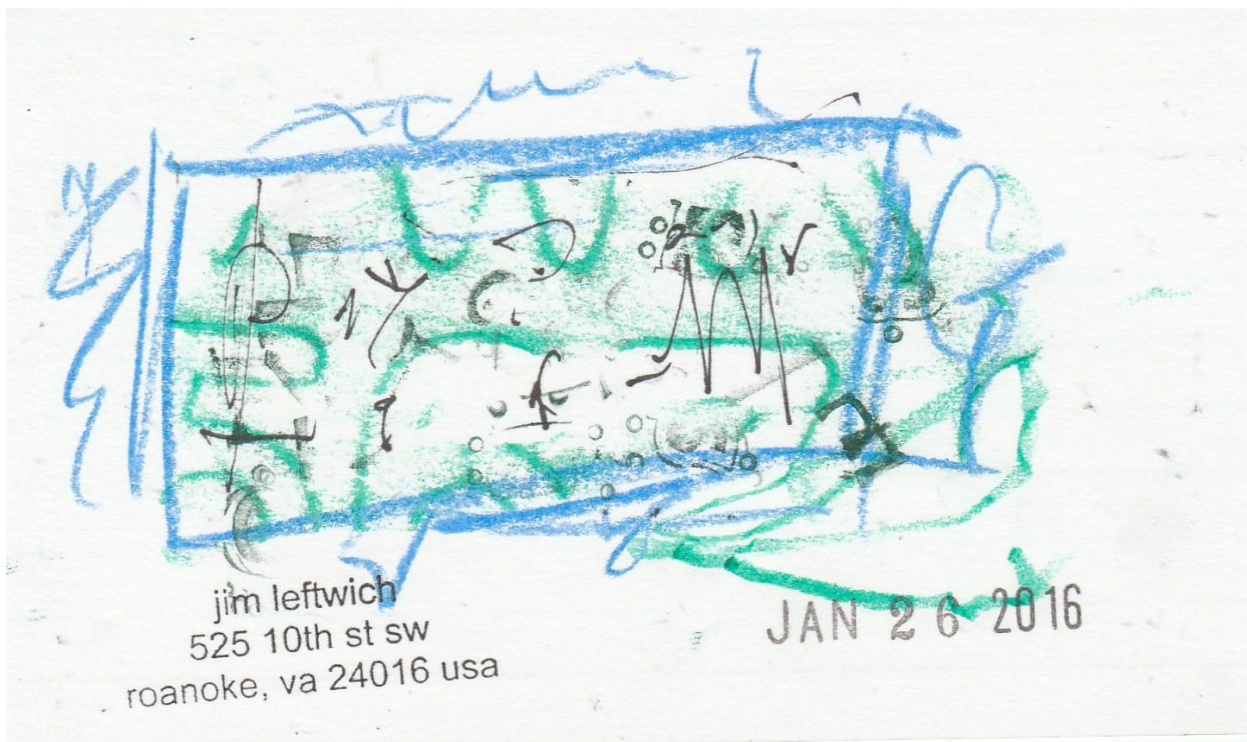






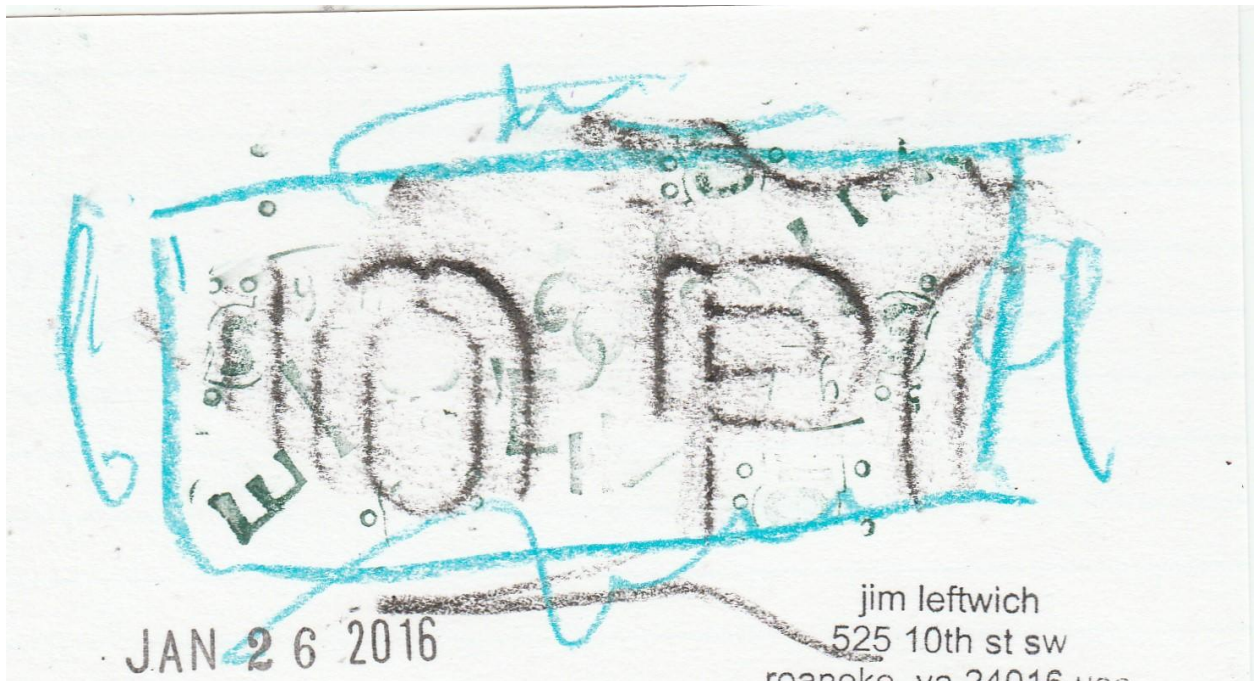
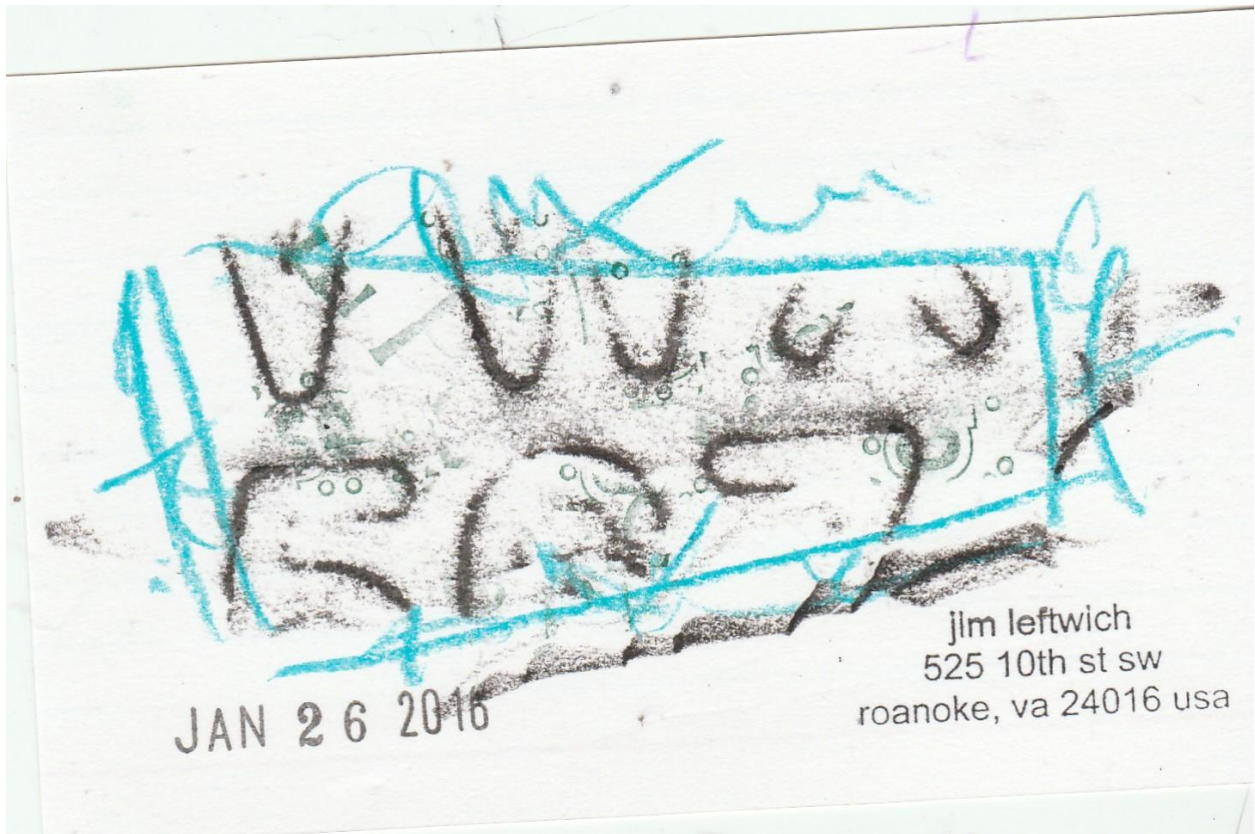
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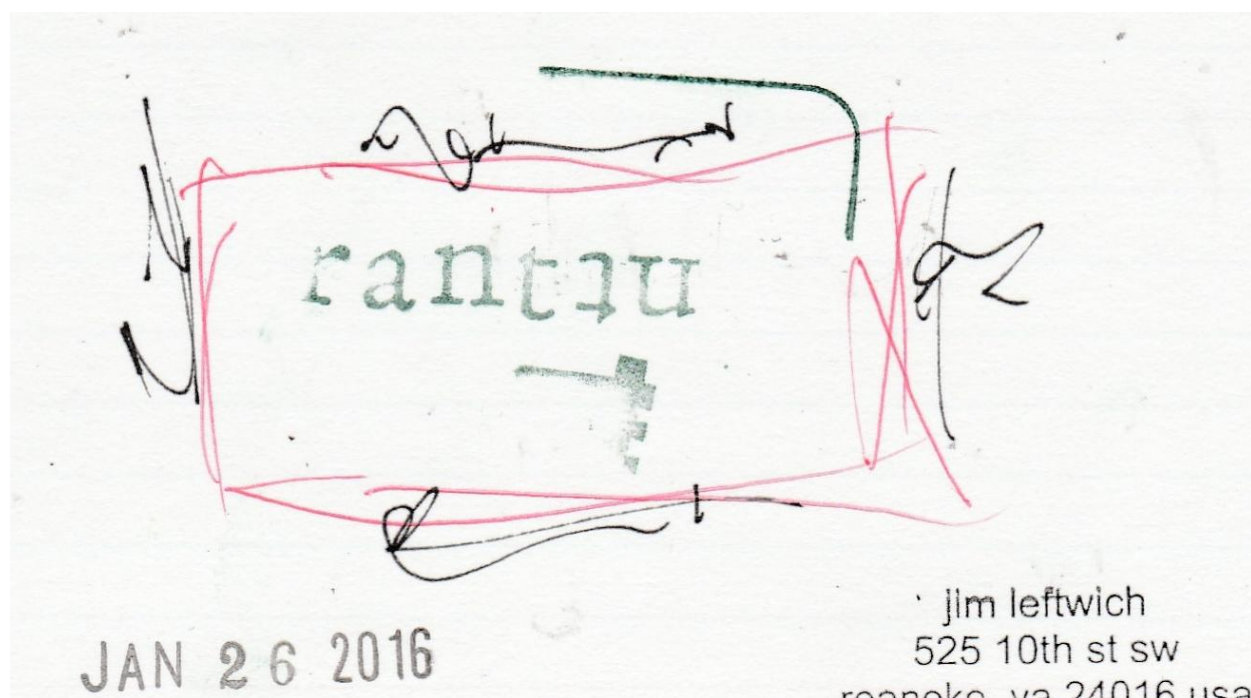
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oxidation

oxidation-reduction
rē-'ak-shən\

CHEMISTRY. A transfer of one or more electrons from one atom or ion (reductant) to another atom or ion (oxidant).

Most common reactions

oxide \-'ak-sīd\
CHEMISTRY. A radical.

Hematite is an

oxidizer \-'ak-sə-
1. CHEMISTRY. A substance that supplies electrons in a chemical reaction. that supplies

Liquid oxygen is commonly used

oxidizing agent
CHEMISTRY. A substance that easily and, by itself, something else in chemical reactions, tends to be oxidized, causing

Potassium nitrate is gunpowder.

oxyacetylene \-'ak-sē-ə-'set-'l-ən\ adj.

CHEMISTRY. Pertaining to the process of burning acetylene in oxygen to produce a very hot flame.

Welders frequently use an oxyacetylene torch to create intense heat.

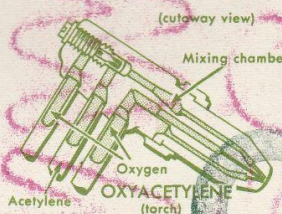
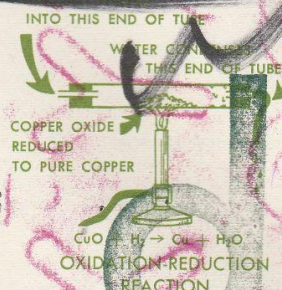
oxygen \-'ak-si-jən\ n.

CHEMISTRY. A colorless, odorless gas at ordinary temperatures, the most abundant element by weight in the known portions of the earth. Oxygen combines chemically with most other elements to form oxides. Symbol, O; atomic number, 8; atomic weight, 15.994.

Most of the earth's oxygen combines either with hydrogen to form water or with silicon to form silicon dioxide or silicate compounds.

ION-REDUCTION

agent, or
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oersted

oersted \or-städ\ *n.*

PHYSICS. The centimeter-gram-second electromagnetic unit of magnetic intensity equal to the intensity of a magnetic field in a vacuum in which a unit magnetic pole experiences a mechanical force of one dyne in the direction of the field; formerly called gauss.

The OERSTED is named for Hans Christian Oersted, the Danish scientist who established the relationship between electricity and magnetism.

offshore bar \'of-shō(ə)r-bar\

EARTH SCIENCE. A sand bar some distance from the shore and parallel to it, sometimes called a barrier beach.

Water between an offshore bar and a coastline is called a lagoon.

ohm \ōm\ *n.*

PHYSICS. A unit of measurement of resistance to a flow of electricity, specifically, the electrical resistance of 14.4521 grams of mercury at 0° C in a tube 106.3 cm. long.

When a potential difference of one volt is applied across a resistance of one ohm, one ampere of current flows.

oil \'oil\ *n.*

CHEMISTRY. Any one of several greasy or fatty liquids that is composed principally of hydrogen and carbon compounds, does not mix with water and may be obtained from petroleum or vegetable seeds. Oils are chemically similar to fats and waxes but have a lower melting point.

The corn or peanut oil used for cooking is obtained by pressing corn or peanut seeds.

olfactory \'fak-t(ə)-rē\ *adj.*

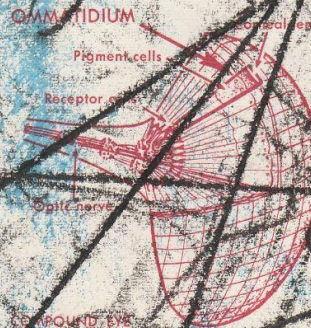
PHYSIOLOGY. Referring to the organs of smell or to the sense of smell.

In man, the OLFACTORY NERVE endings are located in the membranes of the nasal passage.

ommatidium \am-ə-'dē-shū\ *n.*

ZOOLOGY. One of the complete visual elements of the compound eye of an arthropod, containing an external corneal lens, pigment cells, dusting light intensity and receptor cells controlling nerve impulses.

Each OMMATIDIUM in the compound eye of the locust responds to the light in its visual field.



Such dig-
duced in

188

orthocenter

orthocenter \ör-thə-sen-tər\ *n.*

MATHEMATICS. The point within a triangle where the three altitudes of the triangle intersect.

The ORTHOCENTER of an equilateral triangle is equidistant from all three sides.

orthogenesis

orthogenesis \ör-thə-jen-ə-səs\ *n.*
BIOLOGY. A theory that evolution is caused and controlled by unknown perfecting laws, or laws of growth, and that species change along predetermined lines regardless of environmental conditions.

According to ORTHOGENESIS, the Irish elk was destined to develop the gigantic antlers believed to have contributed to its extinction.

orthogonal

orthogonal \ör-thäg-ən-əl\ *adj.*
MATHEMATICS. Right-angled, or pertaining to right angle.
If the tangents drawn to two intersecting circles at a point of intersection are perpendicular, the circles are said to be ORTHOGONAL circles.

oscillate

oscillate \as-ə-lāt\ *v.*
PHYSICS. To move in a regular manner from side to side or back and forth.

The electrons in regular house current OSCILLATE sixty times per second.

oscillator

oscillator \as-ə-lāt-ər\ *n.*
PHYSICS. An electronic device that produces high-frequency alternating current. When used in broadcasting radio waves, its principal use, the frequencies may range from 10 kilocycles to 30 million kilocycles per second.

An OSCILLATOR may be based on the action of certain electron tubes or specific types of crystals.

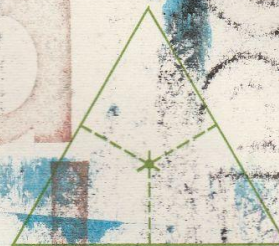
oscillograph

oscillograph \ä-sil-ə-graf\ *n.*
PHYSICS. A device that records variations of electrical quantity as a continuous curve drawn on graph paper or produced photographically on sensitized film.

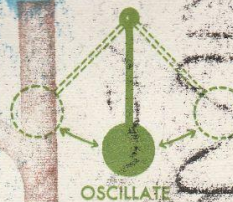
An OSCILLOGRAPH can be used to make a visual record of the fluctuating voltage of a varying electrical current.

oscilloscope

oscilloscope \ä-sil-ə-sköp\ *n.*
PHYSICS. An electronic instrument that shows on a fluorescent



ORTHOCENTER
OF EQUILATERAL TRIANGLE



OSCILLATE



OSCILLOSCOPE

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osteology

osteology \ˈäs-tē-ˈäl-ə-jē\ *n.*

1. MEDICINE. The study of the bones of man and other vertebrate animals. 2. ANATOMY and ZOOLOGY. The set of bones making up a skeleton or a part of it.

OSTEOLOGY has made it possible for doctors to correct many defects in human bone structure.

ostiole \ˈäs-tē-ōl\ *n.*

ANATOMY. A small opening or pore.

Each pore through which perspiration reaches the skin is an OSTIOLE.

ounce \ˈaun-ts\ *n.*

MATHEMATICS. A unit of weight that is equal to $\frac{1}{16}$ pound in avoirdupois weight, or $\frac{1}{48}$ pound in troy or apothecaries' weight.

An OUNCE is equivalent to 28.3495 grams.

outcrop \ˈaüt-kräp\ *n.*

EARTH SCIENCE. An exposure of bedrock, also, a vein or any rock strata at the earth's surface.

An OUTCROP may occur when materials overlying bedrock are carried away by running water.

outlier \ˈaüt-li(ə)r\ *n.*

EARTH SCIENCE. An isolated group of rocks or a detached formation that was once part of a larger formation but that became separated by erosion. An outlier is surrounded by underlying rocks of older age.

A butte is an OUTLIER.

output \ˈaüt-püt\ *n.*

PHYSICS. The energy or signal produced by a device or machine; especially, the electrical energy or electrical signal produced by devices such as transformers or oscillators; also, a quantity of energy or an intensity of signal.

The efficiency of any machine is the ratio of the OUTPUT to the input.

ovary \ˈōv-(ə-)rē\ *n.*

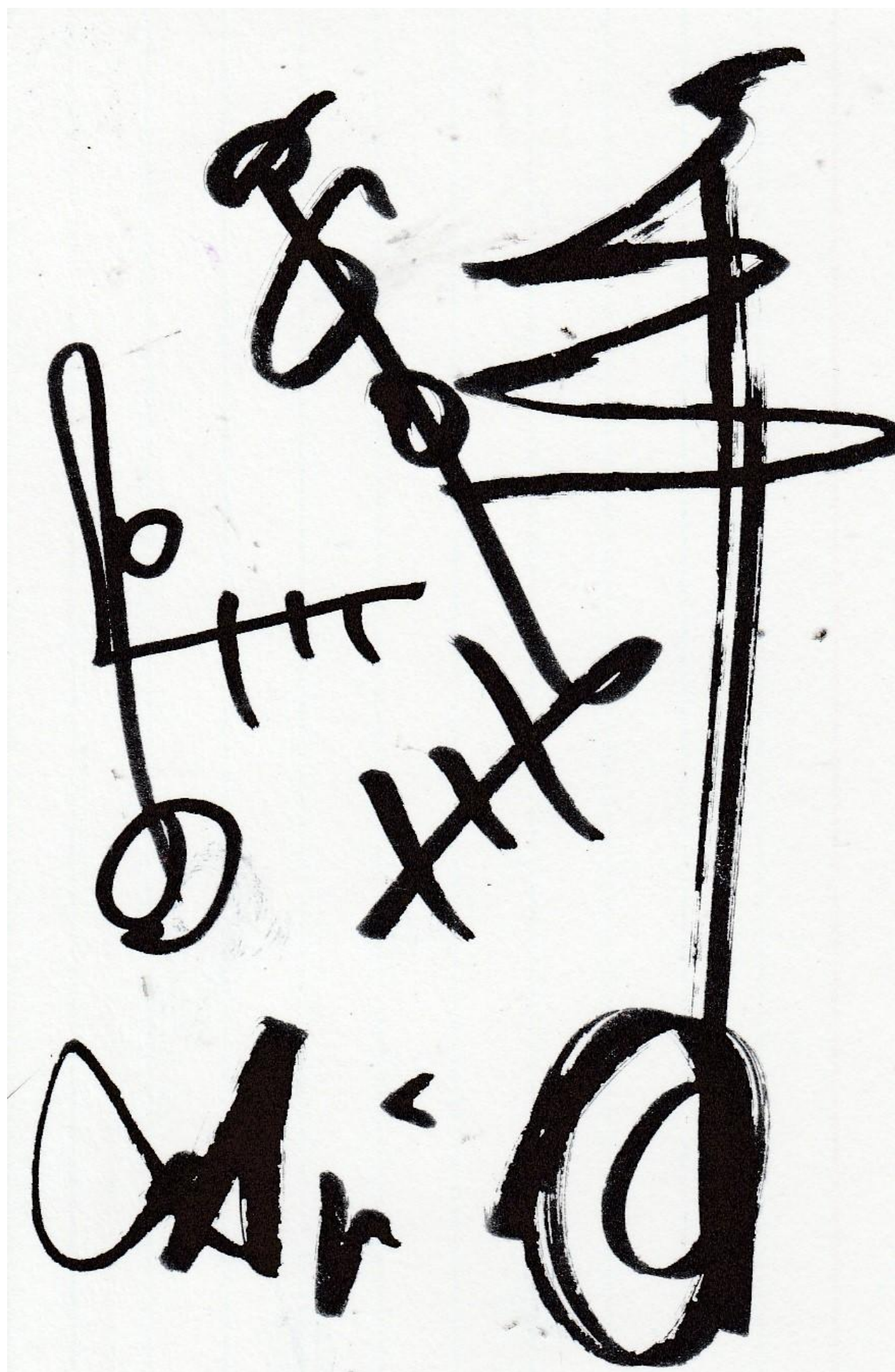
BIOLOGY. A female organ of reproduction. It produces eggs in animals and megaspores in plants.

A fruit is a ripened OVARY.



OUTLIER

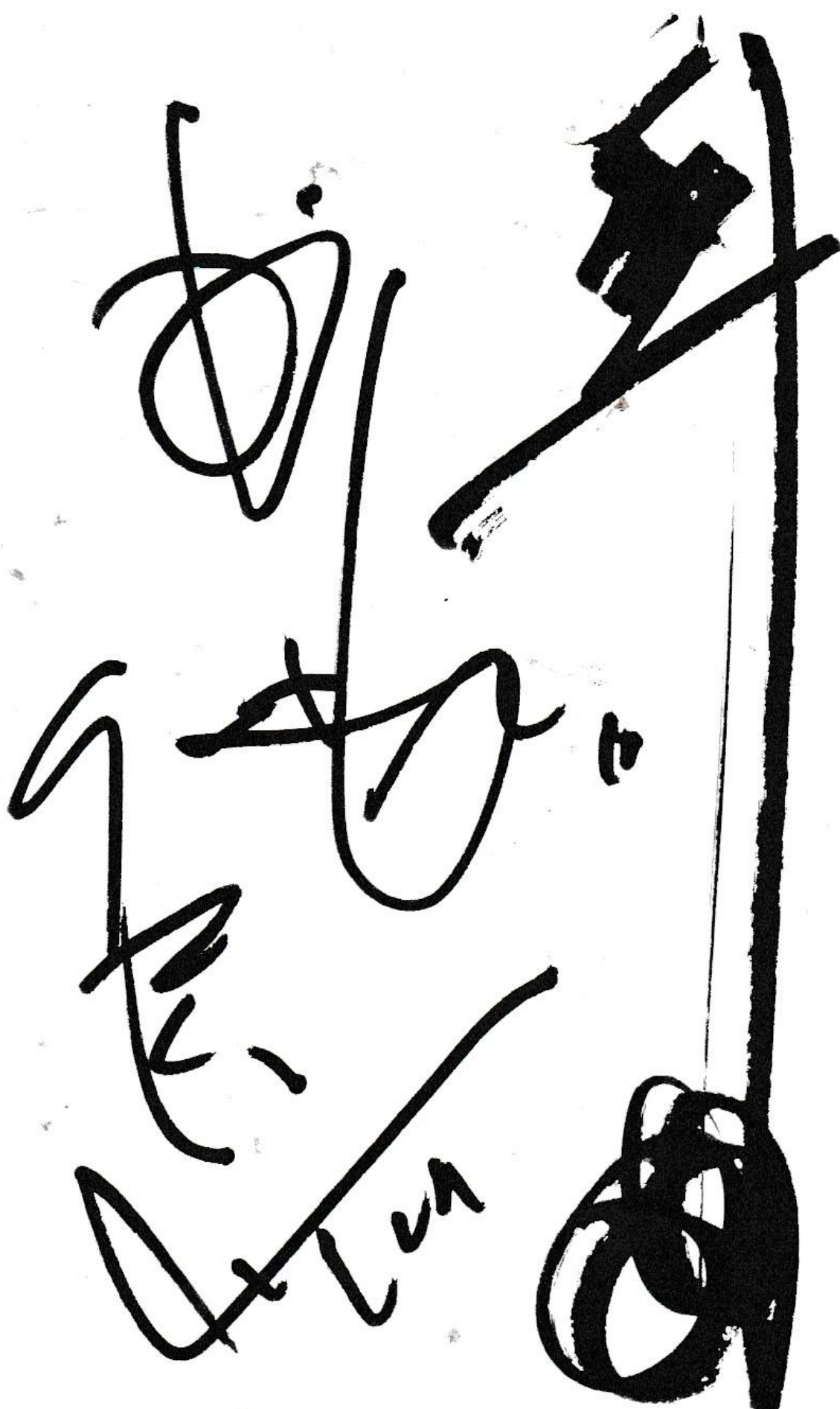






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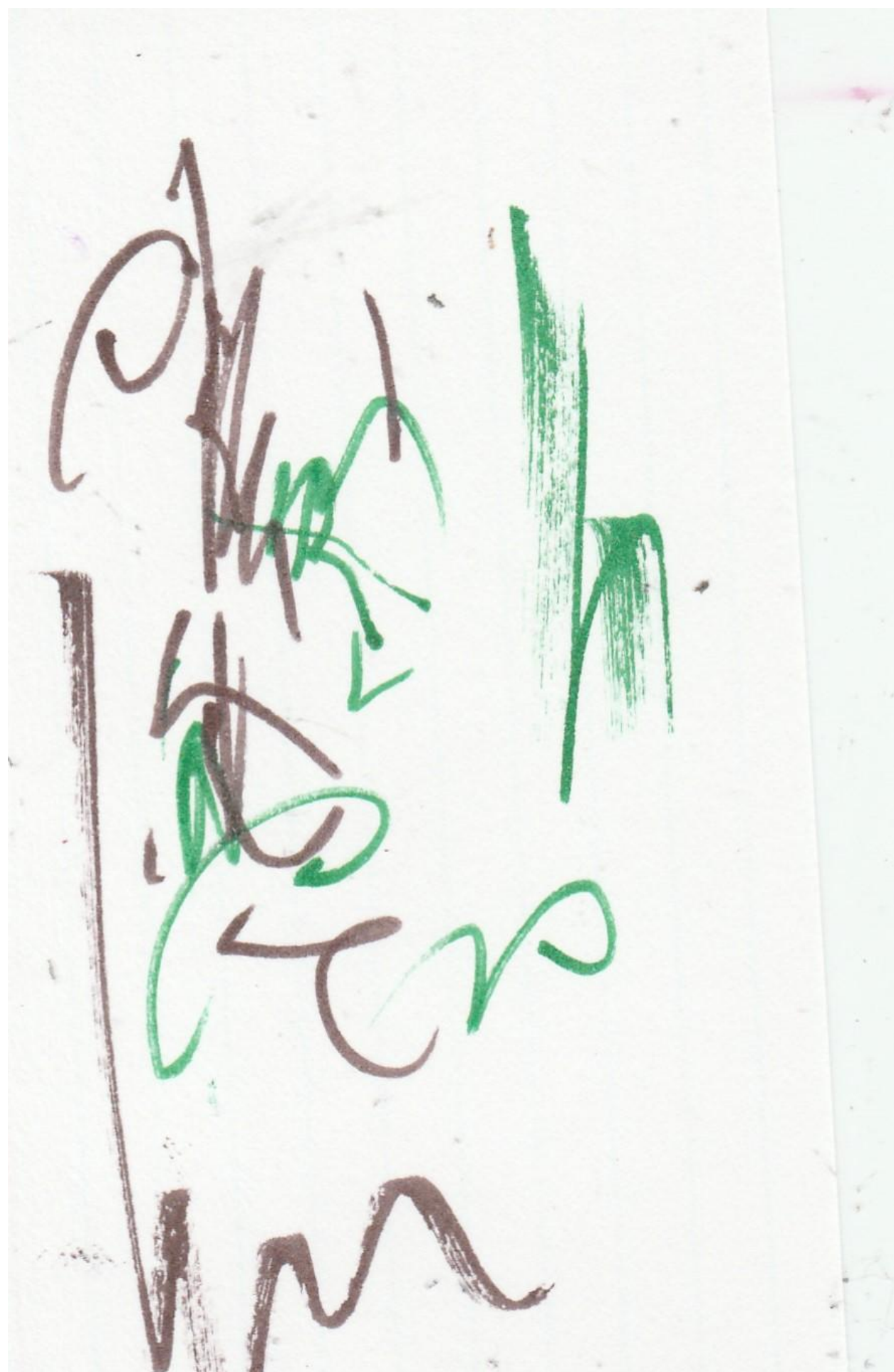
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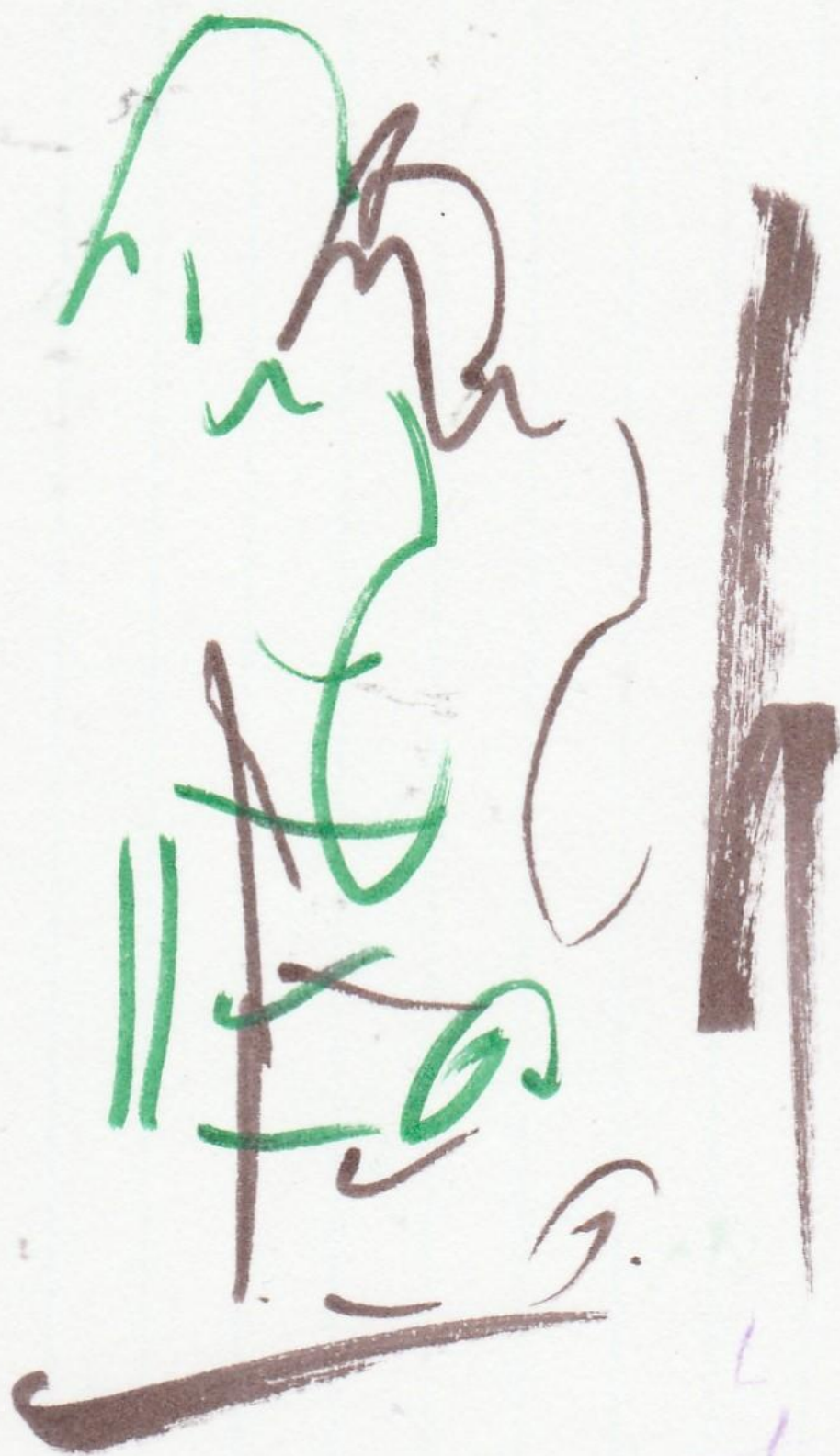
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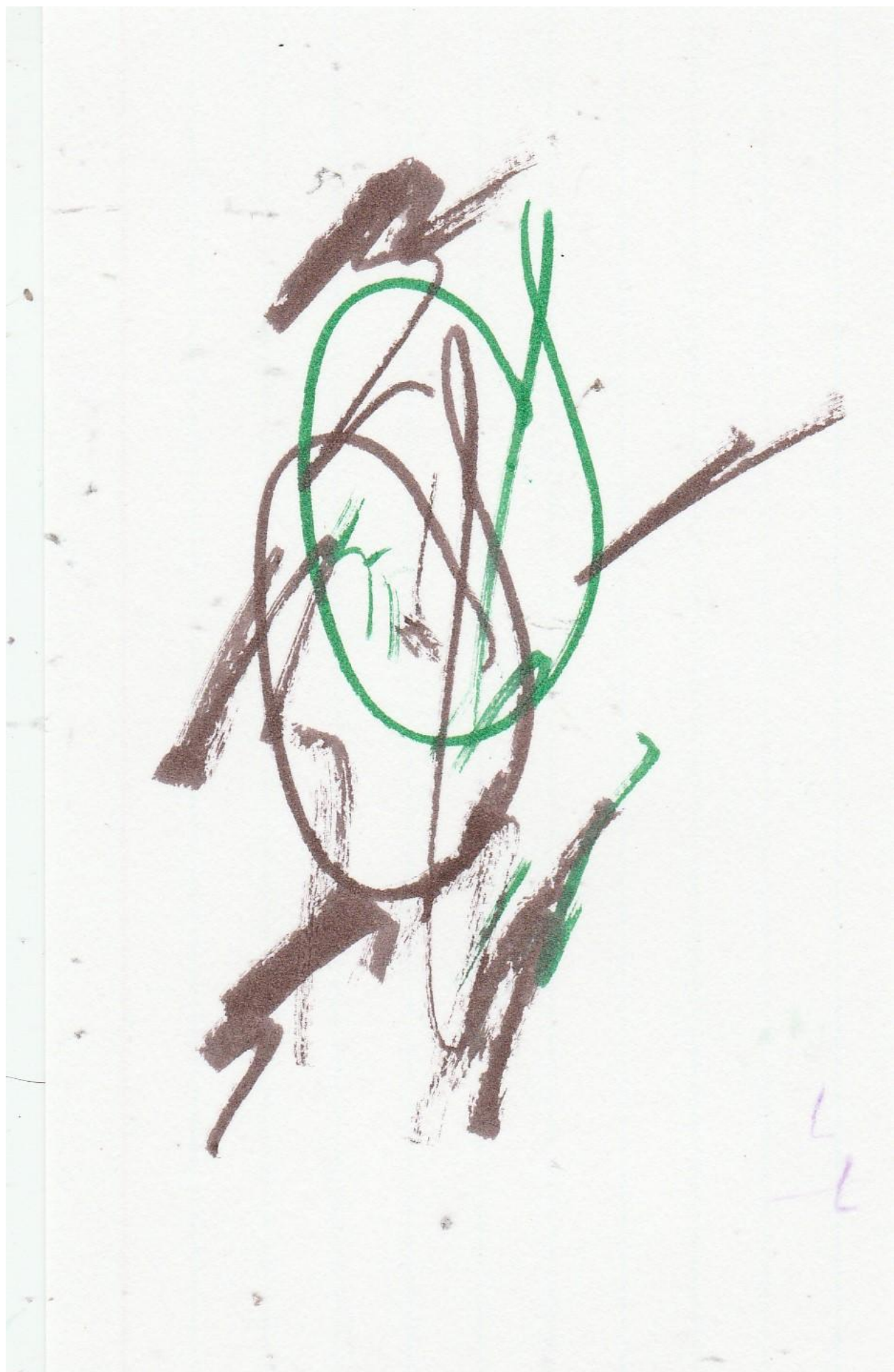


























WMA
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Handwritten text in black ink, appearing to be a signature or stylized name, possibly reading "H. M. H." or similar, with a large, bold, stylized letter "H" or "M" in the center.

MMMM

4/2/20

Handwritten signature in black ink, featuring stylized, flowing characters. The signature is written vertically on a light-colored background.







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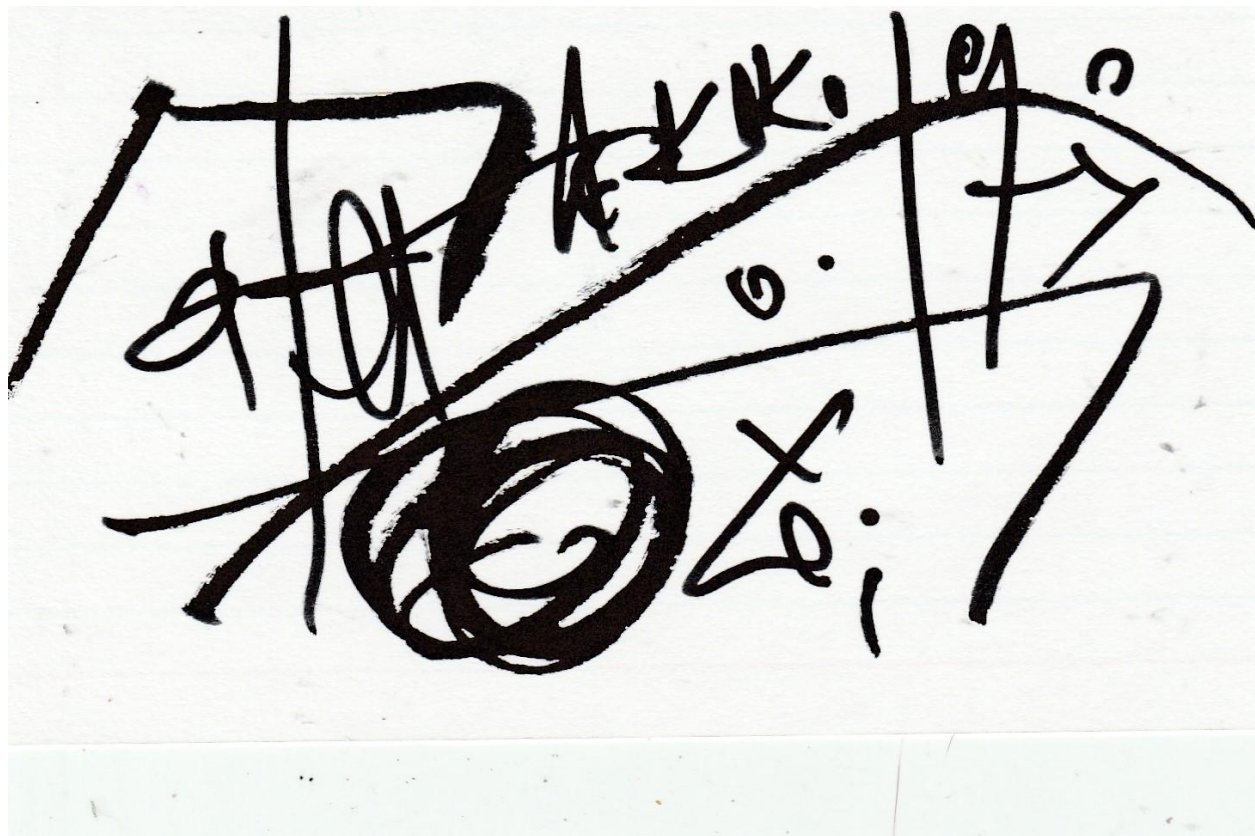
Mr.

James

Handwritten text in black ink, possibly a signature or stylized characters, overlaid on a pink background graphic.

1015

1015

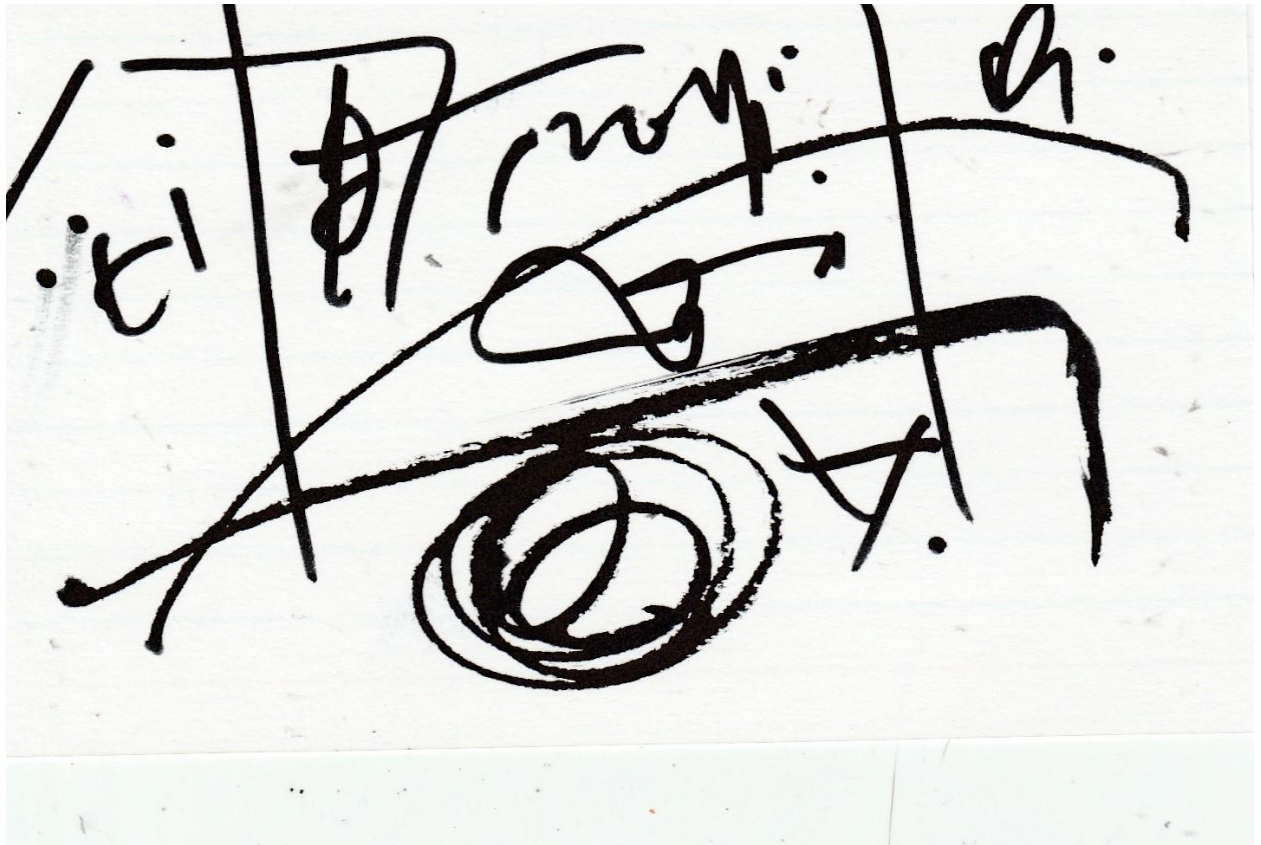


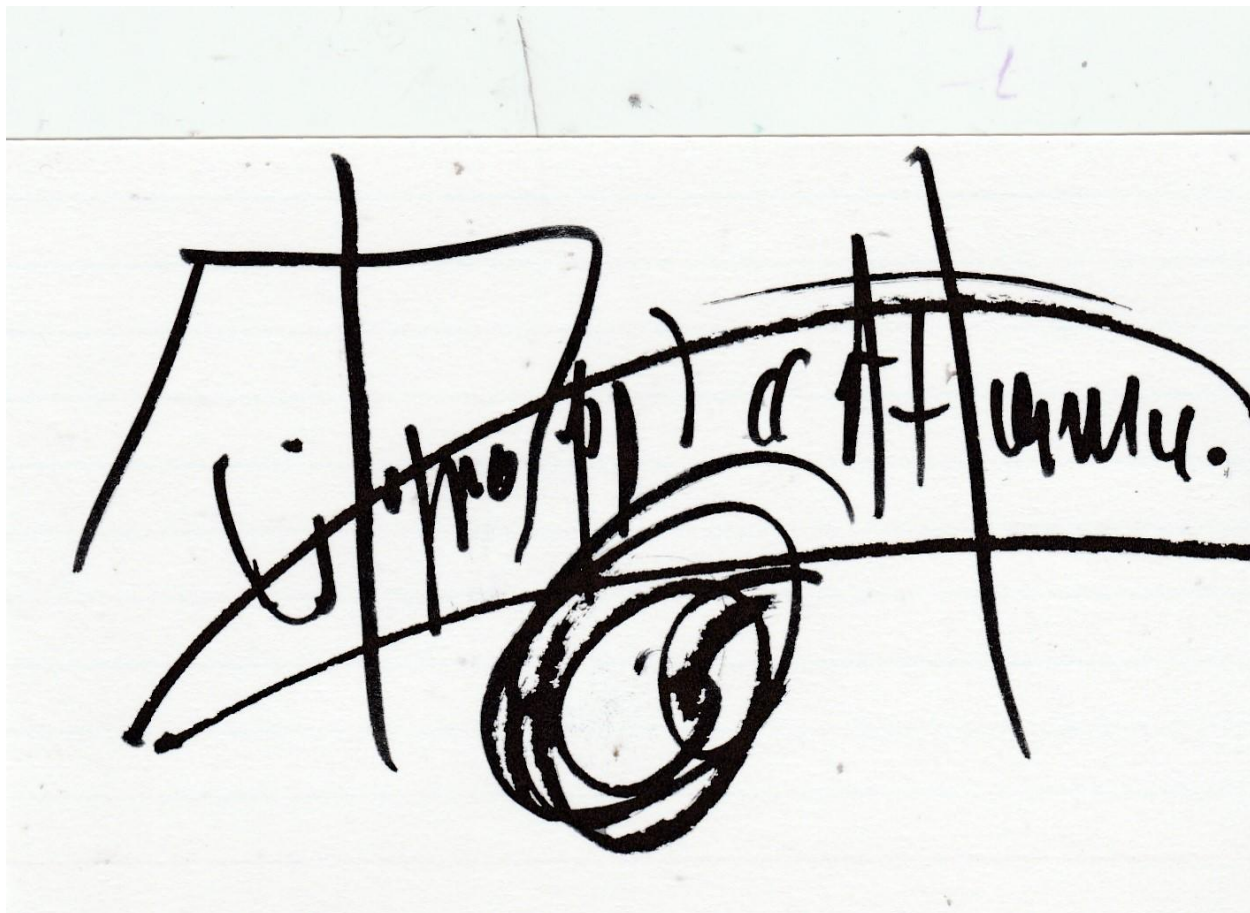
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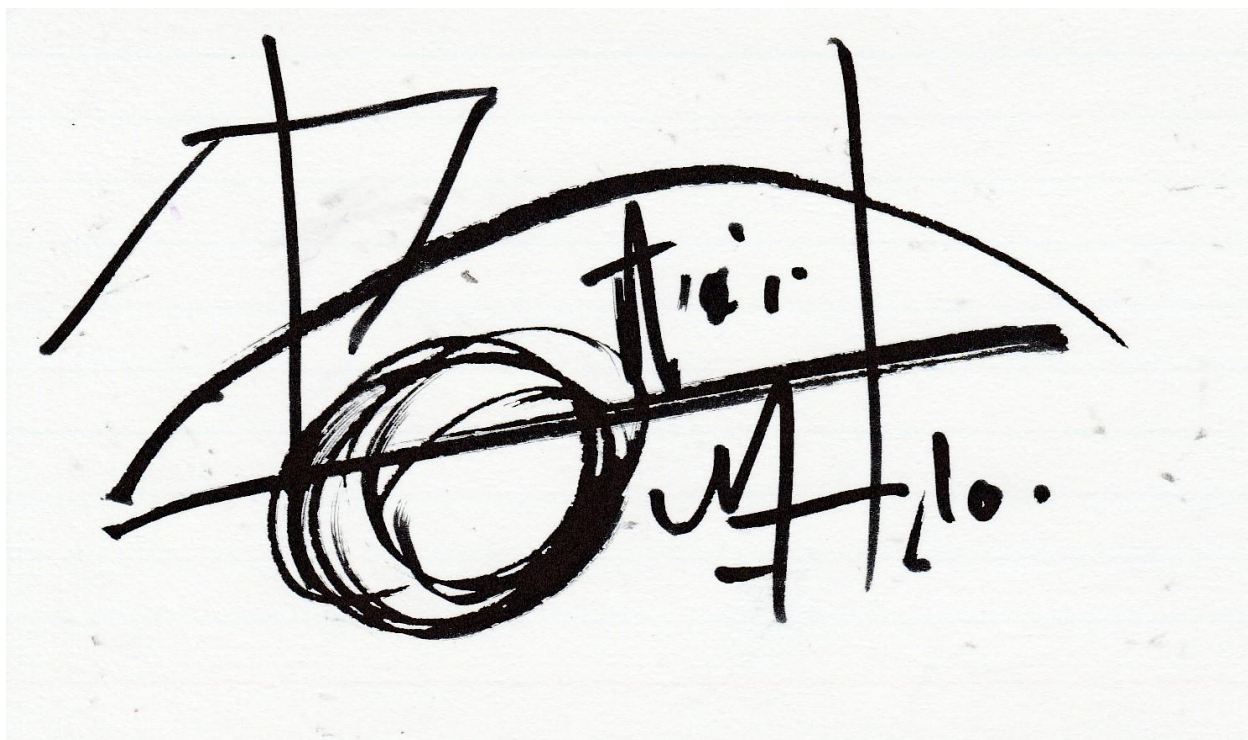
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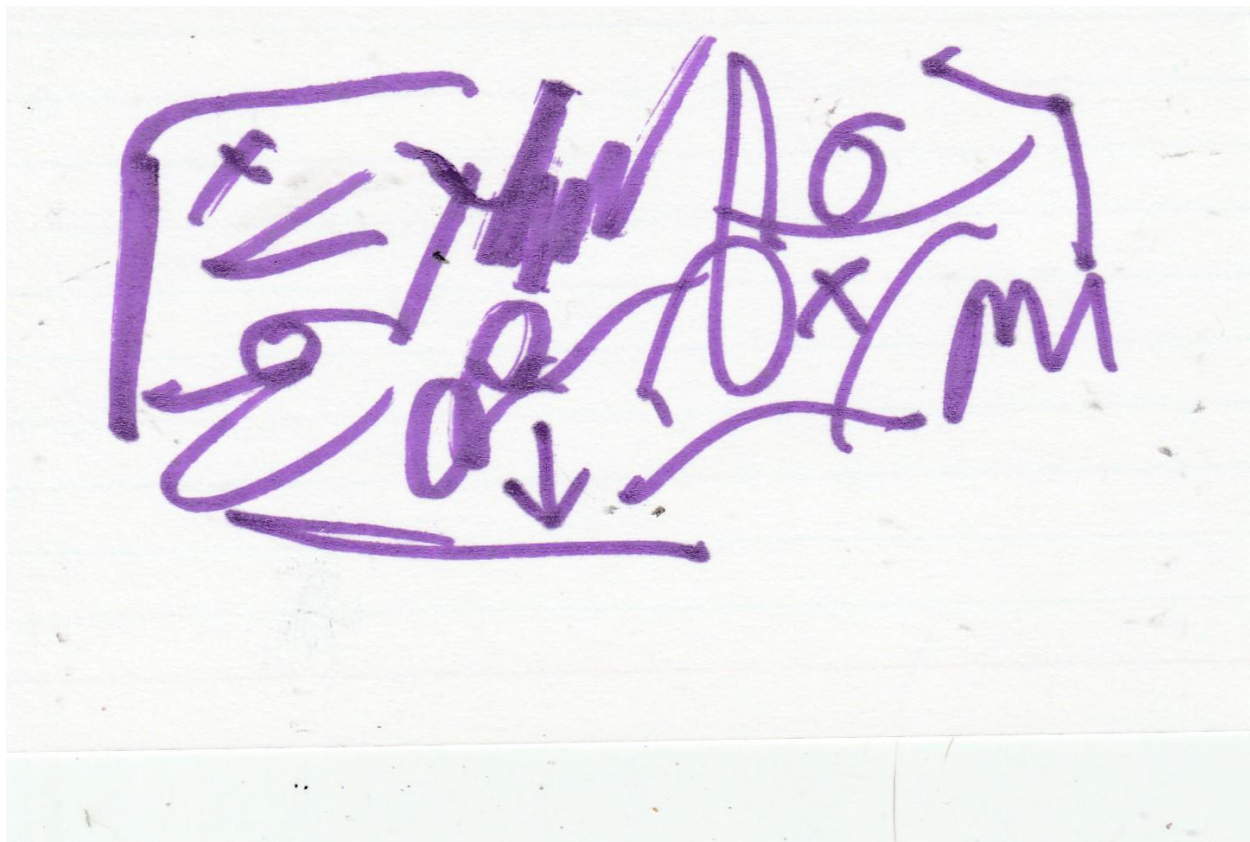






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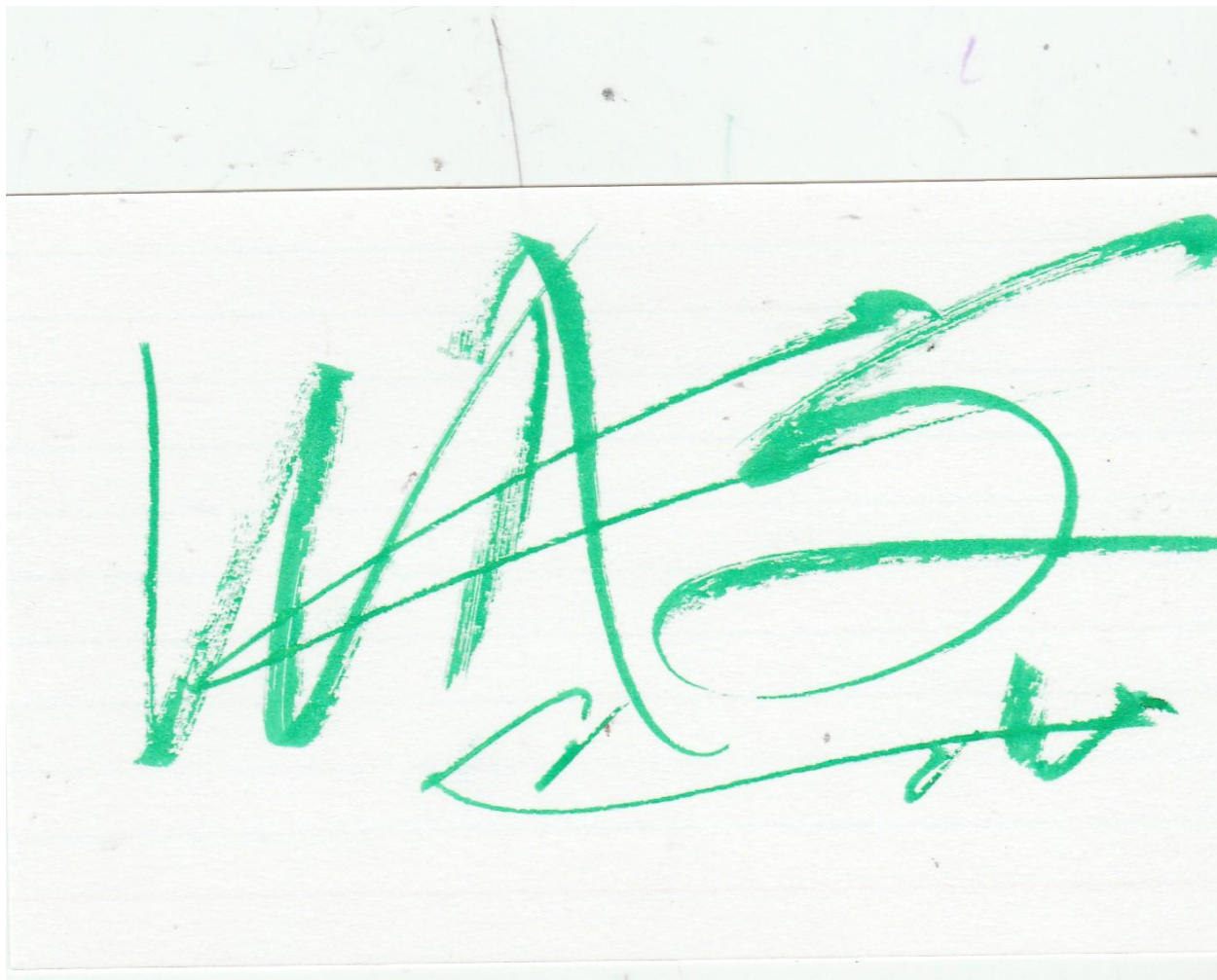
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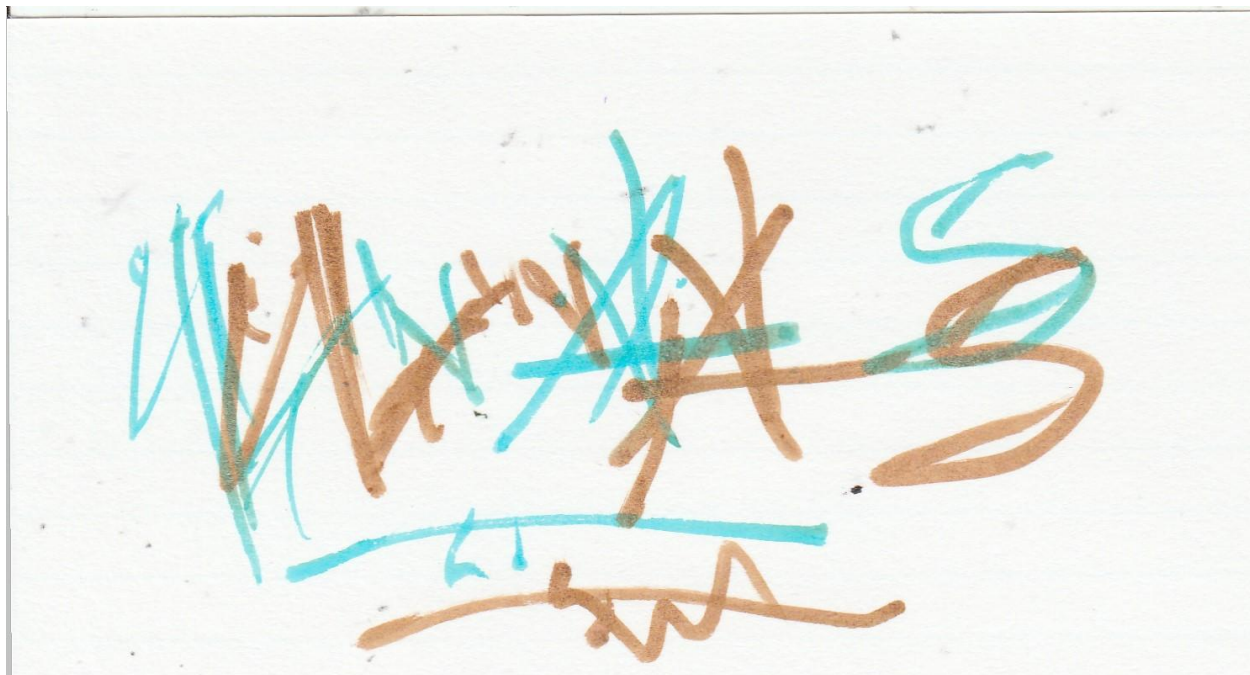
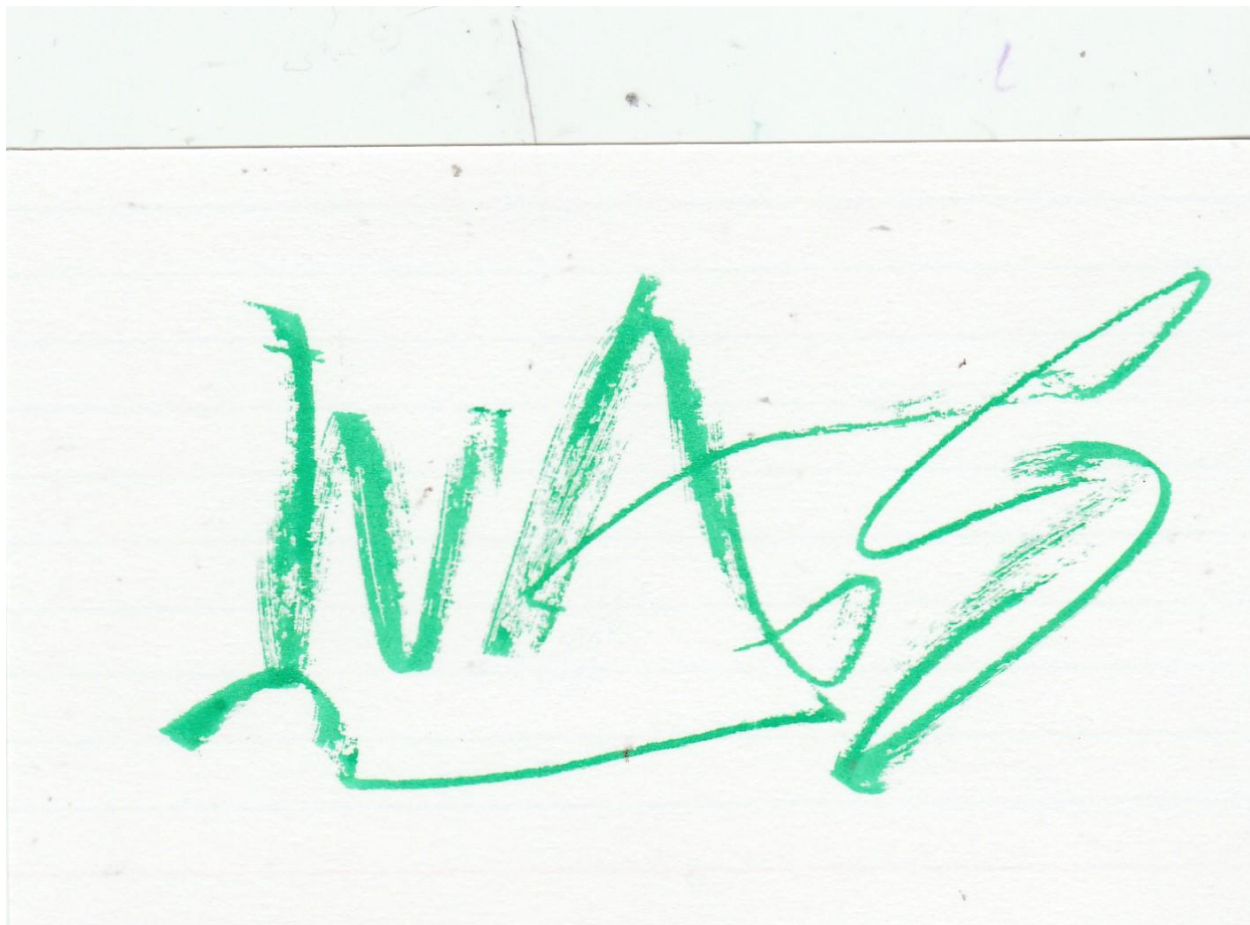
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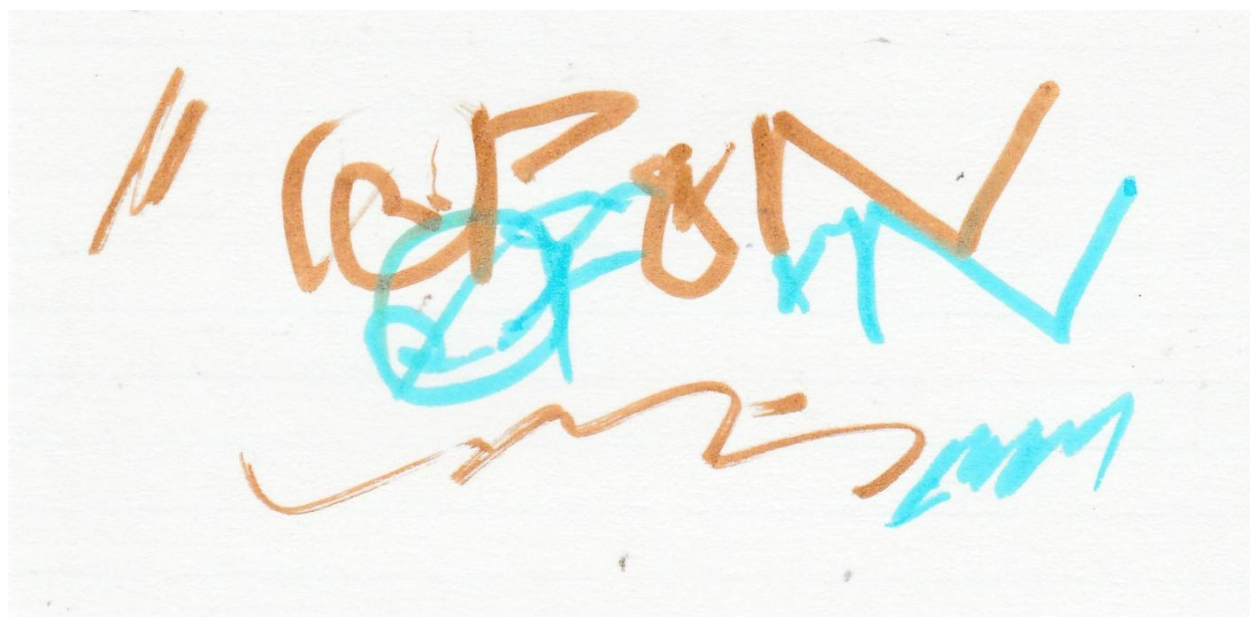
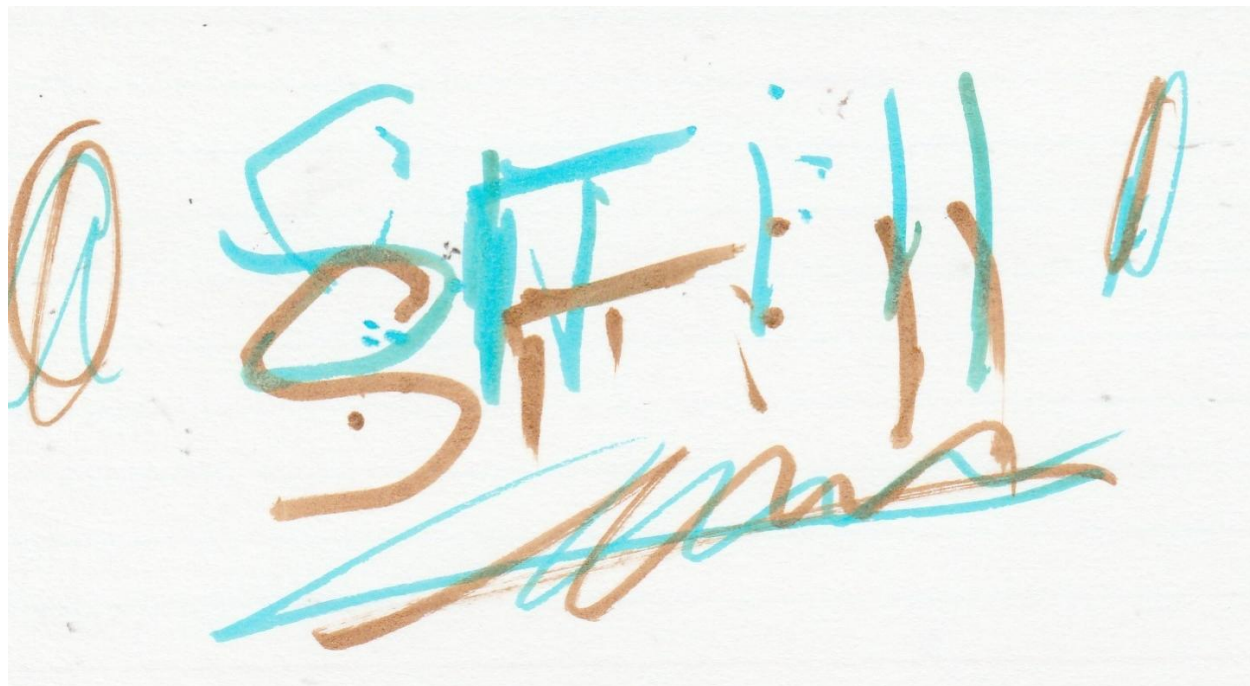
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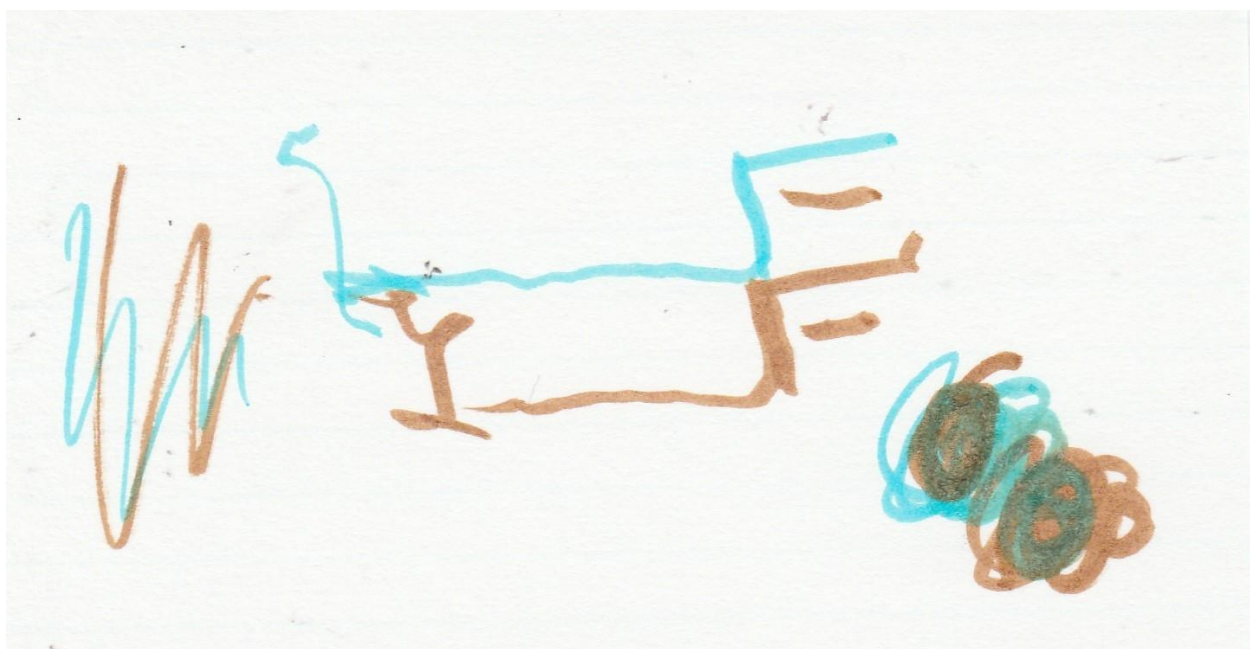
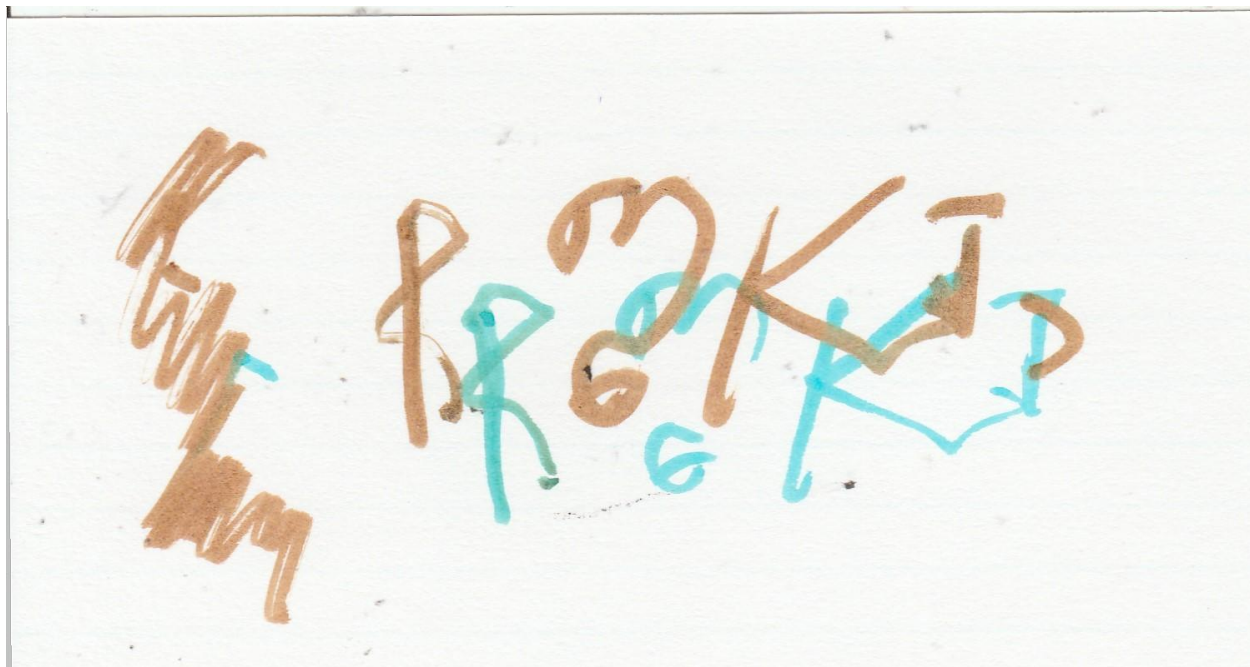


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Jim Leftwich
525 10th St SW

Radford, VA 24016 USA



jim leftwich
525 10th st sw
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